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A Critical Lecture on the Extirpation of the Parotid Gland and its liability to malignant diseases. By Titus Deville, M. D., Prof. of Anatomy in the Medical Department of Lind University; Associate of King's College, London, and late of the Ecole Pratique of Paris, etc.

Mr. President and Gentlemen:

At the last regular meeting of the Chicago Medical Society, Dr. Wickersham, in a paper read by him, spoke of abscess of the parotid gland; to which I replied, by expressing my belief that there was no such disease, and that the salivary glands were almost exempt from morbid structural changes, only one disease being spoken of by sound pathologists, enchondroma, and which has its origin, I believe, in the fibrous tissue, and not in the true structure of the gland. What Dr. Wickersham supposed to be abscess of the parotid gland, was in reality either abscess of the lymphatic glands, one or more, *placed on, or imbedded in the parotid*, or one which had its origin in the areolar tissue. Since that time my attention has been directed to an article in the *Chicago Medical Journal* for this month, December, 1859, written by Dr. Brainard, entitled, "cases of extirpation of the parotid gland and other glandular tumors."

In entering upon this discussion I feel impressed with its serious nature, for I am fully aware of the professional reputation of the surgeon whose authority has been heretofore unquestioned in this section of the country, but I believe it the sacred right and bounden duty of every intelligent man in science to uphold truth and combat error. Those who have seen me either in the lecture room, in medical re-unions, or in private society, know that I vehemently oppose what I feel

convinced to be untrue in medical science, and if every now and then in the course of this lecture I am betrayed into an attitude and mode of expression which would appear to many of you, to whom I am unknown, as dictated by rank personal animosity, believe me, seriously, that you are in error, friend or foe I oppose with all my might and strength, so long as I feel assured that truth is supporting me. Whatever I undertake, I put my whole soul into it.

If I prove to your satisfaction that Dr. Brainard is in error, I plead that as an ample justification for a severe criticism, but if not, then I will agree that there are no terms sufficiently forcible for you to express your disapprobation. I would rather have met the discussion in another form, but from the great desire not in any way to implicate my friends, and for the reasons assigned by the President this evening, I felt there was no other course open to me. It would be mean to attack a little man, but a man of great reputation is a fair game, provided you can prove he is in the wrong, or else the crime is proportionately greater. It is by essays like this one of Dr. Brainard, that science is materially retarded. Ought not surgical science, at every turn, to receive an impulse from a man in such a position in the profession, rather than retardation. When such productions are read in Europe by hospital surgeons, what do they think of American surgery? They are led to cast grave doubts on peculiar cases which are reported, and which may nevertheless be perfectly true. The principles and practice of modern surgery must be supported by sober and undeniable facts.

I beg to enter my solemn protest against the deductions of the author as given in the article written by him, and openly avow that he displays in it an ignorance of the teachings of anatomy and sound pathology, that he is professing dangerous and erroneous doctrines in surgery, and advocating them to the profession. These remarks are to be understood as applying only to the subject under discussion, any other I shall not, at this moment, enter upon. I do not commence it for the sake of opposition; I have already strongly protested against these opinions, before I knew anything about Dr.

Brainard's views. Remember, Gentlemen, that we are living in the latter part of 1859. Dr. Brainard is at this time teaching these doctrines and promulgating them through his journal. Now this is a discussion of the very highest surgical importance to myself and to the profession, all I desire from you is to give me a fair hearing; for one of two things must naturally result therefrom, and on which I am content to take issue; either Dr. Brainard from henceforth falls from the high position he has so long held in these western states, or I must be ranked as a bold and ignorant impostor!

Now what are my especial claims to authority on this subject.

1st. I have carefully dissected the parotid region, scores of times, with the view of demonstrating the great difficulty of the *complete* extirpation of the gland, and the extreme danger of wounding parts which are *immediately essential* to the life of an individual.

2d. I have carefully studied the so-called diseases of the parotid, have seen several myself, but on extirpation have invariably found them to be a *diseased lymphatic gland, and not a diseased parotid.* I will admit that there may be cancerous infiltrations and ulceration extending to it from malignant disease in the immediate neighborhood, and also pus found in the ducts of the parotid. To doubt also that the parotid could take on inflammation would be erroneous, but if the elements of the parotid be inflamed, I believe it is by propagation and sympathy, and not as having origin in them.

3d. I have performed, witnessed or assisted in more than 2,000 autopsies, passed weeks in inspecting and studying the pathological collections of the Hunterian Museum of the Royal College of Surgeons, London, and the Musee Dupuytren, Paris. In connection with the Medical Societies of London and Paris I have seen an infinite number of morbid specimens, *but never one of the parotid, strictly so speaking.*

Before addressing myself in detail to the assertions put forth by Dr. Brainard, let me here briefly review; 1st, some of the more important points relating to the surgical anatomy of the parotid gland. 2d, a brief summary of the anatomy of the lymphatic vessels and glands found in the region of the parotid.

Fascia enveloping the Parotid. Superficial portion. This is continuous below and behind with the cervical fascia, and is usually an extremely dense layer, not only binding down the gland to the surrounding parts, but also sending septa into its structure, isolating its lobules and adhering closely to them, attached superiorly to the zygoma, anteriorly continuous with the fascia covering the masseter muscle. *Deep portion.* It is connected posteriorly to the mastoid process, the tendinous edge of sterno-mastoid and cartilage of ear; this portion is remarkably dense and so firmly adherent to the gland as to render its dissection very difficult when an attempt is made to extirpate the gland; anteriorly, it passes deeply to be connected with the styloid process and is continuous with the stylo-maxillary ligament, (which separates the parotid from the sub-maxillary gland) and also with the spheno-maxillary ligament; superiorly it is attached to the vaginal process, and thus it forms a pouch for the parotid, but the gland is so firmly attached to its fibrous sac, by means of the processes which separate the lobules, and also prolonged over the parts of the gland which insinuate themselves into the various recesses and interstices of the irregular parotidean cavity, as to render the total enucleation of the gland almost impossible.

The parotid moulded to the walls of the excavation in which it is received is of an irregular form. *External surface, or base* of the gland corresponds to the skin, it is of a somewhat irregular quadrilateral form, but a portion of the gland, '*socia parotidis*' is prolonged forward with the duct over the masseter muscle. The *anterior surface* of the parotid is grooved to receive the posterior border of the ramus of the jaw, and corresponds to the internal pterygoid muscle, stylo-maxillary ligament, and masseter muscle, on the external surface of which it is prolonged for a varying distance, separated from it by some areolar tissue, branches of the portio dura nerve and transverse facial artery. A process of the gland is prolonged between the condyle of the lower jaw and stylo-maxillary ligament, *lying around the internal maxillary artery.* The *posterior surface* of the parotid corresponds to the cartilaginous portion of the external meatus, upon the convexity of which it is

moulded, and to which it is connected by dense areolar tissue and also to the mastoid process, sterno-mastoid and digastric muscles. *Superiorly* the parotid is in relation with the zygoma and tempero-maxillary articulation. *Inferiorly* it fills up the space between the angle of the jaw and the anterior border of the sterno-mastoid muscle. It here comes in relation with the sub-maxillary gland, but is separated from it by the stylo-maxillary ligament. The *internal or deep surface* of the parotid is very uneven, it fills up the posterior part of the glenoid cavity and the space between the ear and ramus of the jaw; it surrounds the styloid process and the muscles which arise from it, and passes down between the styloid process and pterygoid muscles, *and is only separated from the pharynx, and internal carotid artery, as well as the internal jugular vein, also the spinal accessory and glosso pharyngial nerves by a comparatively thin layer of areolar tissue, and a little deeper lie the pneumo-gastric, hypoglossal and great sympathetic nerves.* In addition to these relations which it bears to the parts by which it is surrounded and limited, the parotid has important relations to vessels and nerves which pass through its substance. 1st. The external carotid artery traverses the gland from below upwards and on its inner side, giving off in its course the auricular anterior and posterior, with other small branches, and dividing in its substance into the internal maxillary and superficial temporal. 2d. The temporal and internal maxillary veins, which uniting in the substance of the parotid, form the trunk of the external jugular, which is joined by the posterior auricular and transverse facial veins; also *there is a branch of communication between the external and internal jugular veins which traverses the parotid.* 3d. The trunk of the facial nerve is found to divide in its substance into several branches, the superficial temporal of the inferior maxillary nerve traverses it, also the great auricular, but more superficial.

To any one who may be skeptical of this anatomical description, I will demonstrate its truth on the dead subject in the dissecting room of our Medical College.

2d. *Lymphatics.* The lymphatic vessels which course towards the parotid and traverse it, open into the ganglions of

the upper part of the neck and come from several sources.

1st. Those from the anterior third or half of the scalp pass vertically to connect themselves with one or two ganglions situated near the summit of the gland.

2d. Those from the eye-brow and the external portion of the eyelids, the skin over the cheek and parotid region open into ganglions situated in the thickness of the parotid, and in general so small that it is difficult to discover them, unless the lymphatic vessels are injected and traced to their termination.

3d. Those lymphatic vessels which come from the external surface of the pinna of the ear converge towards a ganglion in front of the tragus, which is generally very apparent.

4th. Those which come from the helix, and all the internal or posterior surface of the pinna, turn round the external meatus to empty themselves into two or three ganglions of variable size, which are situated on the inferior part of the posterior border of the parotid.

All these ganglions are the *superficial set*, and lie beneath the fascia, but there are others, two or three in number, which are situated deeply behind the external carotid and along its course. They exist constantly and are generally very small. M. Huguier (Gaz. des Hopitaux, 1849, p. 97,) describes ganglions beneath the parotid, between the styloid muscles. These deep ganglions, according to Theile,* receive the deep lymphatics of the face, buccal region, soft palate and its pillars.†

I shall divide my authorities into three classes.

1st. To the most eminent anatomical authorities for the decision as to whether the extirpation of the parotid gland is a practicable, safe and easy operation or not.

2d. To the greatest surgical authorities to decide as to whether they have ever seen a case of diseased parotid, or not.

3d. To the records of pathological museums and the testimony of the most reliable authorities in pathology, are reserved the proofs of the non-existence of malignant disease of the parotid.

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* Encyclo. Anatomique Allem ; trad : par M Jourdan.

† I am much indebted to the Encyclopoedia of Anatomy and Physiology, the descriptive Anatomy of M. Sappey, on these points.

The first two lines of Dr. Brainard's paper read thus: "The possibility of removing the whole of the parotid gland by operation is hardly called in question by intelligent surgeons."

In reply, I will not deny the utter impossibility, but I contend that the entire removal of the parotid gland is doubted by the most intelligent anatomists and surgeons, with whom I coincide, and it is an operation which Dr. Brainard would not willingly undertake.

In the first place, I beg to refer you especially to what has been already stated by me, respecting the surgical anatomy of the parotid gland. I submit that I have therein given clear proofs that the *entire removal* of the parotid must be a most dangerous operation and most difficult of execution.

1st. From the form and manner in which the gland is attached to its fibrous envelope, from the extreme irregularity of the gland, and from the many processes which insinuate themselves in the interstices of important parts difficult to reach, rendering its complete enucleation almost impossible.

2d. Recollecting that the external carotid artery and its branches, the external jugular vein and its tributaries, together with the branch of communication between the external and internal jugular veins would almost of necessity be cut in such an operation, the frightful amount of hemorrhage which would ensue, proceeding from the bottom of a deep, narrow and irregular wound, the almost insuperable difficulty of controlling it, would make the boldest surgeon hesitate before attempting such an operation.

3d. Lying immediately beneath the parotid gland, and only separated by a comparatively thin layer of areolar tissue, is the internal jugular vein and internal carotid artery, the eighth and ninth pairs of nerves, together with the grand sympathetic, any injury to which would place the life of the patient in the utmost jeapordy.

Let us quote a few anatomical authorities on this point.

1st. Cyclopœdia of Anatomy and Physiology. Vol. 3, p. 904.

Article, "*Parotid region.*" Several lymphatic glands are found imbedded in the superficial surface and in the substance of the parotid. These may readily be distinguished from the tissue of the parotid by their red color.

They are not uncommonly the seat of disease, and if their removal becomes necessary, the operation may be done *without much difficulty and without great risk of wounding any important textures.* But a slight consideration of the deep connections of the parotid and of its close relations to the many important parts which pass through it and by which it is surrounded, will be sufficient to convince the surgeon that the removal of this gland cannot be effected without extreme difficulty and danger, and that it must necessarily be attended by injury to some of the more important parts in this region."

2d. A treatise on Surgical Anatomy of the head and neck, by Allen Burns. (2d Edition, p. 125.)

"The parotid gland is sunk so deep, and is so firmly locked in between the ascending plate of the lower jaw, and the mastoid process, that when it becomes diseased, the patient cannot open his mouth, and from the effect of the fascia, the tumor is flat; *its extirpation is quite out of the question; its impracticability* is proved by reviewing the connections of this gland; whoever has, in situ, injected this gland with mercury, and then, even where it was healthy and free from preternatural adhesions, and limited to its natural size, has tried to cut it out, would be convinced, when he saw the mercury running from innumerable pores, that the gland extends into recesses into which he could not trace it in the living body; if this be true in health, what must it be in disease, where the parts are wedged and niched into every interstice around? Those who assert that they have extirpated the parotid gland, have. I am fully convinced, mistaken that little conglobate gland, which lies imbedded in its substance, and which does sometimes enlarge, producing a tumor resembling a diseased parotid for the parotid itself."

3d. A treatise on Surgical Anatomy, by Abraham Colles, Professor of Anatomy and Surgery to the Royal College of Surgeons, Ireland. (Part 1st, p. 115.)

"*May not the chronic enlargement of some of these lymphatic glands have been mistaken for a schirrus of the parotid itself, and the removal of such by the knife been boasted of as the extirpation of the parotid gland?* When you contemplate the nerves and blood vessels which pass through the substance of this gland, and also the depth to which it sinks, as it is imbedded between the ramus of the lower jaw and the mastoid process of the temporal bone. When you reflect on the very firm and almost inseparable attachment of the gland to these parts, *you will be very tardy in giving credit to the stories of extirpation of a schirrous parotid gland.* The depth to which this gland sinks is such as renders it difficult, on the dead body, to dissect out that portion which lies between the temporal and lower maxillary bones; and this, with the advantages of having the skin previously stripped off, and the view undisturbed by any hemorrhage. When such difficulties occur in the dead, how can we hope to surmount those which must be superadded in the living body? We shall, however, find still stronger objections to this operation than those which arise from these difficulties. We shall find it attended with such unavoidable destruction of important parts as must render the *attempt most certainly fatal.* First, the portio dura of the seventh pair of nerves must necessarily be cut across; a paralysis of this side of the face would be an inevitable consequence of the division of this nerve. The termination of the external carotid, which is yet to give off the temporal

and internal maxillary arteries, enters into the lower extremity of this gland. Unless this be tied before the lower part of the gland is raised, *a violent hemorrhage must instantly carry off the patient.* The difficulty of dissecting down to this artery, and then passing a ligature round it, need not be pointed out to any one who reflects that it passes from under the digastric and stylo-hyoid muscles, as it is about to enter into this gland. Some, aware of the danger and difficulty of this part *of their supposed operation*, assert, that they finished the removal of the parotid by tying a ligature round this portion of the gland, and thus causing it to slough away. But, granting for a moment, the practicability of this step, yet it must appear inconceivable how they could dissect out even the upper portion of this gland. For, independently of its position, and the depth to which it sinks between the temporal and lower maxillary bones; independently too of the embarrassments which must attend the hemorrhage from the unavoidable division of many small arteries and large veins in the first steps of the operation, the surgeon has to cut across the trunk of the internal maxillary artery; for this artery passes off from the continued trunk of the carotid completely across the substance of this gland. So that this gland cannot be detached from one half of the ascending ramus of the lower jaw, without the certain destruction of this artery. The end of the divided vessel shrinking in under this bone *cannot afterwards be secured by ligature or by compression.* Should the operator leave behind him any part of the schirrous gland, he must be aware that his operation will be followed by a return of the disease. If to avoid this error, he should dissect at all deeper than the seat of the upper part of this gland, *he will almost inevitably wound the trunk of the internal carotid artery*, which runs anterior to the root of the styloid process, *or of cutting into the internal jugular vein*, which runs immediately behind this process."

4th. The Surgical Anatomy of the Arteries of the human body, by Robert Harrison, Professor of Anatomy and Surgery University of Dublin, Surgeon to Jervis Street, Hospital. (4th Edition, p. 72.)

"First divide the parotid duct and its accompanying arteries and nerves, and raise them, together with the anterior part of the gland, from the masseter muscle and ramus of the jaw; turning this portion of the gland backwards towards the ear, next divide the temporal vessels, and detach the gland at its superior extremity, then separate it from the cartilage of the ear, from the mastoid and digastric muscles, dividing the portio dura nerve; *the circumference of the gland is thus completely loosened*, and now if the student grasp it firmly with a view to twist or tear it out of its situation, *he will find it very difficult to do so; he may even raise the head of the subject from the table, or break the gland, before he can dislodge it from the deep recess into which it extends itself.* He may observe that it fills the glenoid cavity between the capsular ligament of the jaw and meatus auditorius; on drawing it out of this cavity, a process of the gland is seen to pass inside the ramus of the jaw, *with the internal maxillary vein and artery, between the bone and internal lateral ligament*, and to touch the inferior maxillary nerve; this process often swells out between the two pterygoid muscles into a considerable mass, connected like a distinct lobe to the body of the gland, by the narrow neck that passes on the inside of the ramus of the bone. When this has been dissected out of its situation, and the gland drawn towards the neck, a thick portion of it is seen sinking in between the mastoid process of the temporal bone and the angle of the jaw, and resting on the styloid

process, around which it is completely folded, *so as to come in contact with the great vessels and nerves at the base of the cranium;* to this part of the gland the student should pay particular attention; if both veins and arteries have been injected, he may perceive *the proximity of the great jugular vein, as well as of the internal carotid artery;* as the gland passes behind the styloid process, *it touches the vein, the eighth and ninth pairs of nerves,* whilst anterior to this process, *it rests on the internal carotid artery and sympathetic nerve;* this portion of the gland is also extended above the stylo-maxillary ligament, and is attached to the internal pterygoid muscle, where it enlarges very considerably; the manner in which this deep lobe of the gland is thus impacted between the styloid and mastoid processes, and again between the styloid process and the angle of the jaw, *explains the difficulty of tearing it out of this situation,* as some authors have advised in the operation of extirpating this gland, in cases of its enlargement and disease Before the student proceeds with the dissection of the internal maxillary artery, let him again consider the numerous connections of the parotid gland, let him open the anterior or superficial lobe of it, and expose the ramifications of the facial nerve, and the branches of the external carotid, also the large veins which descend from the temple to meet the great trunk of the internal maxillary, which comes from within the ramus of the jaw; let him reflect on the serious injury that must be inflicted in attempting to remove even this part of the gland, which, however, is comparatively easy to that of the deeper portion, and which can only be accomplished with safety in the living subject, by proceeding with the greatest caution among such important parts, an injury of some of which must be almost certainly fatal When we consider these natural impediments to the extirpation of this gland. and how these may be increased by disease, and when we take into consideration also. *that malignant disease of this gland is very rare, it is impossible not to question the correctness of many of those superficial accounts which are written of the extirpation of this gland as of an ordinary tumor.* Although the parenchyma of the parotid gland is not very subject to malignant disease, yet tumors of this character not unfrequently arise in its cellular tissue, or in some of the lymphatic glands which lie along its inferior border, or which are imbedded in its substance: when a tumor of this nature increases in size, *its pressure will cause the absorption of the par tid, whose situation it will thus come to occupy and whose form it will resemble.* My own experience, however, will enable me to say, that such a tumor, even when possessed of considerable size, will admit of removal *with less difficulty and danger than the parotid gland, even in its healthy state,* for it will generally be found invested with a capsule, which will enable the operator, when once it has been fully exposed and loosened, to tear it from many of its connections, and thus to dispense with the knife; such tumors, too, are seldom traversed by the facial nerve, or by the external carotid artery or its branches, nor are they so intimately connected to the deep vessels, nerves and muscles of this region as the parotid is, nor as might be previously apprehended."

The learned author then refers to Allen Burns as an authority, giving the same quotation to which I have already drawn your notice.

5th. Traite d'anatomie topographique, ou Anatomie des Regions du corps humain, par Ph: Fred Blandin, Professor of Anatomy, etc., Surgeon to the King. (2d Edition, p. 188.)

"Schirrous tumors of the parotid region may arise from the parotid, but

we must avow that they are nearly always situated in the lymphatic ganglions which immediately lie on this gland. The influence of these enlarged lymphatic glands on the parotid is very great and remarkable, they compress and push it inwards, and atrophy it more or less completely, often even the new state which this gland assumes might lead to the belief that it had been extirpated in an operation, but it rests behind untouched. Besides, the anatomy of this region shews us clearly the gravity of such an operation, all the deep parotidean nerves are inevitably destroyed, above all, the facial. There will be of necessity a large number of vessels cut by the extirpation of the parotid, above all, the trunk of the external carotid artery from whence a startling *foudroyante* (thunder-bolt) hemorrhage is to be feared, hemorrhage which demands the special attention of the surgeon, and against which he ought to be ready prepared To diminish the fear from this hemorrhage, and to obviate the accidents which may occur from the section of the external carotid, Beclard proposed to tie the external carotid below the parotid before commencing the operation of extirpation This plan ought always to be adopted on principle to prevent a frightful hemorrhage, and give the surgeon time to effect the most difficult ligatures; above all, that of the internal maxillary artery, which plunges beneath the neck of the condyle of the lower jaw. Notwithstanding the ligature of this artery it still continues to bleed from the numerous communications of its anastomotic branches.!'

6th. Traite d'anatomie descriptive, par J. Cruveilhier, Prof. d'anatomie, Paris, (3me Edn., Tome 3me, p. 256) in a foot note, says:

"These relations (of the parotid) prove to us the almost absolute impossibility of the extirpation of the parotid by a cutting instrument."

7th. Traite pratique d'anatomie Medico-Chirugicale, par M. A. Richet, Professeur agrege a la faculte de Medicine de Paris, Chirugien de l' Hopital, St. Louis, etc. etc. (1857, p. 392.)

"*Surgical and Pathological Deductions.* Of late years the question of the complete extirpation of the parotid, when it has become cancerous, has been much discussed. In a thesis of concours in 1841, A. Berard affirmed in the positive. citing for the support of his opinion several observations which appeared to him to establish beyond a doubt, that it had been done. According to this able surgeon, the external carotid artery and facial nerve are necessarily cut, and establishes their section as a criterion whether the extirpation of the parotid has been complete or not. The anatomical description I have already given appears to me to be a strong presumption *against the possibility of this operation*, and taking them into consideration I cannot agree with A. Berard. In effect, I do not think that any one can maintain that the extirpation of the parotid is an easy operation *when practised on the dead body, and even when the gland is in a perfectly healthy state* All persons who have been tempted and have essayed the operation on the dead body with the view of studying the parotid excavation, avow that it is very long and very difficult to enucleate all its prolongations, which insinuate themselves in the intervals which are left between the muscles, which form the walls, and above all, if one would respect the important neighboring organs. What will it be, when these difficulties are joined to the flow of arterial and venous blood, the movements of the patient, *the pathological softening of the glandular tissue, which always propagates itself more or less, to the neighboring parts.* All these circumstances, *singularly complicate the operation on the*

living, which all the ability and coolness of the surgeon cannot charm away. For the support of these opinions I will cite two facts which appear to me to cut the question better than all reasonings. In the first, I find even in the thesis of A. Berard himself, he gives a case in which Beclard proposed to extirpate the parotid, and who died, happily for the surgeon, some days before the epoch fixed for the operation. M. P. H. Berard dissected the tumor *and found that it sent a prolongation which introduced itself into the internal jugular vein.* Mr. Berard says, 'we may conceive the embarrassment where such a complication existed, and which no one could know beforehand, would throw the surgeon, but is this a reason to always reject the operation.' M. Richet replies, 'No, without doubt it is not a reason to reject it altogether, but it appears to me to be sufficient to cause always hesitation, even in the boldest surgeon, and above all, to cause us to reject in principle the complete extirpation of a diseased parotid. The second case carries equally with it this conviction. I had under my care a patient affected with *an enormous tumor of the parotid region*, who had been under homœopathic treatment for it, during six months, in the Hospital St. Marguerite. This poor unfortunate suffered most atrocious pain, which left him no repose neither day or night, he could scarcely open the jaw to swallow small quantities of food, he supplicated me every day to operate upon him, as some persons had deemed it practicable, but I took good care not to be tempted, dreading to meet a complication of the kind which occured to Mr. Berard. Some weeks after his entry the patient died in a state of emaciation difficult to imagine. Wishing to do the operation as I should have done it on the living, I proceeded to the extirpation of the parotid, but I was not long in discovering that it was, even here on the dead body an impossible enterprise. The parotid was entirely converted into a half solid substance of creamy-white color, nearly liquid in the centre, it was only with *an unheard of difficulty* that I succeeded in completely enucleating it from its pouch, and even then, when I thought I had removed it all, I found beneath the internal pterygoid, between the styloid muscles, *and all around the internal carotid artery, the pneumogastric and great sympathetic nerves prolongations of the diseased tissue, which I could not detach but with the handle of the scalpel. Certainly it would not have been possible to extirpate it on the living, without wounding these organs*, and I applauded myself in having resisted the supplications of the patient. *For all these reasons, I think, contrary to the opinion of A. Berard, that the extirpation of a degenerated parotid is an impossible operation.* Moreover, it appears that this able surgeon, has without his seeming to know it, felt the difficulty of sustaining the discussion on this ground. for after having given the different proofs in support of his views, (at p. 220,) Berard adds, 'it is not the question to determine whether a cancerous tumor of the *whole parotid* can be extirpated, but only to prove that all the morbid mass may be withdrawn from the cavity which it occupies.' To which Richet replies, 'without doubt that is the true question, and he cannot put it otherwise than to avow, that under its first form it is not susceptible of a satisfactory solution. It does not appear to me admissable, in truth, that any surgeon who should know beforehand that the cancer occupies all the parotid, even until it has comprised the portion which lies on the pharynx, internal carotid artery, internal jugular vein, and the pneumogastric nerve, *would dream to attempt such an operation.* Thus, reduced to its true limits, the question of the extirpation of the parotid is nothing more than an affair of appreciating each particular case, and that is a matter which neither reasoning nor facts can determine beforehand in an absolute manner. Surgical anatomy has incontestably shewn the difficulty, I will say the almost impossibility of extirpation of the whole of the

parotid gland on the living, it is then in the hospital clinique where this question can alone be decided. Relative to the observations collected by A. Berard, as cases of the extirpation of the parotid, where the external carotid artery and facial nerve have been conserved, they prove nothing else than this, the knowledge that the operator had penetrated deeply, and extirpated the greater portion of the gland. But far from serving as a rule, such cases are only exceptional, and to sum up in one word, I think that a prudent surgeon in presence of a cancerous tumor of the parotid ought to abstain, if he is not sure that the degeneration not only does not occupy the entire gland, but a portion very restricted and perfectly limited.

The second point in Dr. Brainard's paper to which I call your notice, is contained in the following words, "might not the possibility of removing the whole of the thyroid body, or of the lower jaw, be denied with equal reason."

I contend that the cases are not parallel, the removal of these parts though they would necessarily be attended with a great loss of blood, yet the hemorrhage could be more easily controlled, and there would not be such a liability to wound parts which are important to life. In the extirpation of the thyroid body, the four branches of the superior and inferior thyroid could be tied before commencing the operation, with comparative facility; but supposing the internal jugular vein and internal carotid artery, which are necessarily endangered by the complete extirpation of the parotid, were wounded at the bottom of the parotidean space, I think it would be almost impossible to control the hemorrhage. In the case of the lower jaw, the facial, transverse facial and internal maxillary arteries and veins would be cut across, but it would be in a large open wound, and ligatures could be applied with no great difficulty.

3d. An important admission, to which I call your especial notice, is found in these words: "Some who were forced to admit the removal of the gland, still contend that it has been done rarely, and deny that most of the cases reported as such refer to the gland at all. Velpeau, in his operative surgery, and Beclard in his thesis, seem to cast doubt upon all those cases in which no great hemorrhage occurred, and in which the face was not paralyzed."

You have already heard quoted the eminent anatomical authorities as to the non-practicability of the extirpation of the parotid, I now come to my second class of authorities, those of the most eminent surgeons of modern times, to decide as to

whether they have ever seen a case of diseased parotid or not. Their opinions are entitled to the very highest consideration, and are in my belief conclusive.

* 1st. Professor Fergusson, of King's College, my old teacher, says, in his Practical Surgery, p. 412:

"Twenty years ago it was more the custom to speak of tumors of the parotid than it is in the present day, and for my own part *I cannot say that I have seen a single unequivocal case of the kind.* I have seen many swellings in the seat of the parotid, and have removed many with my own hands, but have invariably noticed that these were, to all appearance, developed in a lymphatic gland; when small, the parotid was slightly compressed or perhaps turned aside; and when large, most of it had disappeared."

2d. The late Professor Liston, of University College, (2d American Edition, p. 326.)

"The tumors *over the* parotid, and behind the ramus and angle of the jaw deserve some notice. These, whether enlargements of the lymphatic glands, or adventitious formations, are bound down by a strong condensed cellular sheath or fascia, and also by the fibres of the platysma-myoides which pass upon the side of the face This growth is equally extensive among the deep-seated parts, as it is prominent externally. The parotid gland is displaced and absorbed; the diseased mass is imbedded in its substance, and ultimately occupies its place. The vascular supply is abundant, and the nerves become intimately attached to the posterior surface of the condensed cellular cyst The tumor is firmly fixed in all ways, by its strong investments and firm adhesions, and by its being, as it were, dove-tailed by its processes between the bones. Sometimes, after the removal of tumors of long standing in this situation, I have often exposed the whole cavity betwixt the mastoid process and the ramus of the jaw, the styloid and pterygoid processes, muscles, etc"

3d. Druitt, the best English commentator on Surgery, in his Surgeons' Vade Mecum, (7th Edition, p. 475,) says, speaking of parotid tumors:

"This name may be assigned to those tumors which occur in front of the ear, *over the parotid gland* Cysts of various sorts, filled with glairy matter or with blood; enchondromatous tumors, pure, or mixed with newly developed gland tissue and enlarged lymphatic glands, are the commonest; cancer may also be met with. Such tumors may of course involve the facial nerve; the facial artery, or the external carotid, or may extend inwards to the pterygoid and styloid processes. 'If there be reason to suspect' says Mr. Liston, 'that the disease is of a malignant nature, and not thoroughly limited by a cellular cyst, no interference is admissable It, on the contrary, it be at all moveable, has advanced slowly, possesses a smooth surface and is firm, (neither of stony hardness, nor pulpy,) then an operation may

* Dr. Brainard has very ingeniously introduced the name of Prof Fergusson in his article, which might lead an unwary reader to the inference that this distinguished operator lent the sanction of his high authority to such proceedings. After speaking of the division of the facial nerve, in connection with the extirpation of the parotid, he writes thus: "Mr. Fergusson says that in a case in which he divided the facial nerve, the paralysis became after a time, much less conspicuous than at first."

be contemplated' If slowness of growth and capability of being *moved freely* concur, the surgeon should remove such tumors; keeping his knife close to the tumor, especially at its deep part, so that it may not divide the nerve or artery, if possible. Sometimes, however, they may be so involved that their division is unavoidable The patient should always therefore be warned of the possibility of facial paralysis after the removal of one of these tumors."

4th. Velpeau's Operative Surgery, (Amer. Edition, p. 15,) speaking of parotid tumors, he says:

"I will say only in anticipation, that those tumors formed by the parotid gland, of which so much has been said, *have all of them*, or almost all of them, for their basis or point of departure *the lymphatic ganglions* properly so called. It is from having frequently ascertained the truth of this position that I take the liberty at the present time *to affirm it positively*."

Again, (at page 446,) he cites fourteen cases of supposed extirpation, all at that time known to him in England, Germany, France, etc., he sums them up thus:

"*Appreciation of the facts* The question whether we may or may not extirpate the parotid gland in its totality, appears to me to have been incorrectly stated. The salivary glands, including with them the parotid, scarcely ever degenerate. The tumors that have been removed under their name almost all belong to other tissues and to other organs. Even in the substance of the parotid itself there are a great number of lymphatic ganglions. These ganglions when they swell become fungous, tuberculous and cancerous, and are transformed into bosselated tumors, which spread out, flatten, and disorganize the glandular tissue, and lead to misconceptions of the real character of the parts which are extirpated. I have performed extirpations of this kind at least twenty times, to such extent *as to lay bare the whole parotid cavity*, and to be afterwards under the necessity of submitting the tumor to a careful dissection, in order to satisfy myself that the ganglions, rather than the glands, had been the source of the disease. I have, moreover *encountered in this region* meliceromatous, lipomatous, fibrous, melanotic, encephaloid, and other tumors."

I could go on citing eminent authorities, amongst others of which I name the Professors of the University of Edinburgh, but enough has been said to prove my assertion.

And now, Gentlemen, let me adduce. if it be possible, still stronger proofs *and which appear to me to be unanswerable;* my third class of evidence, viz: the records of pathological museums, and the testimony of the most reliable authorities in pathology, and these are of the utmost value.

1st. Because the records of museums have been collected by generations of the most eminent surgeons and pathologists.

2d. Because pathologists have not only the light of their own experience to guide their judgments, but those of the specimens to be found in all the great museums of Europe, and

the reports of all well authenticated pathological observations.

1st. Manuel d'anatomic pathologique generale et appliquee, contenant la description et la Catalogue du Musee Dupuytren, par Ch: Houel, Conservateur du Musee, etc., etc., (1857) at page 668, speaking of enchondroma, he says: "these pathological productions may arise in the hard or soft parts, we find they arise *in the areolar tissue*, we meet with them particularly in the glands, and they are found in the parotid, the testicle and the mamma, but the most common is in the region parotidean, and often even the cartilaginous mass is contained in the middle of a fibrous mass, more or less considerable."—(Vide preparation No. 23, Musee Dupuy: presented by M. Nealton, which shows well this condition.) A case is reported by M. Richet, (Soc. de Chirurgie Bull. Tome v., p. 88) where a patient died twelve days after the operation on a cartilaginous tumor of the breast, the lungs were found to contain many small cartilaginous tumors, varying in volume from that of a pea to a nut, and even beyond. Mr. Broca, in the discussion which followed, sought to establish the possible hereditary nature of enchondroma, citing in proof a case reported by M. Paget, the specimen of which is conserved in the Museum of the Norfolk and Norwich Hospital."

You see, Gentlemen, the existence of enchondroma is here denied as having origin in the glandular substance of the parotid, and they may be found in any part where fibrous tissue abounds. Is there any other disease whatever of the parotid gland spoken of in this work. *Not a single word.* Let us turn to the Catalogue of the Museum Dupuytren, and at page 778 what do we find.

Preparation No. 23, to which allusion has already been made. Enchondroma of the parotid, one specimen only. (Nealton.)

No. 24. Tumor, probably hypertrophy of the parotid.
Model in Wax!

No. 25. Cancerous tumor of the parotid.
Model in Wax! (Ruffhn.) Italian!

No. 26. Cancerous tumor of the parotid.
Model in Wax! (Sabatier.) Italian!

Is there any other preparation of diseased parotid. Not one!

How comes it that some surgeons in Paris speak of cancer of the parotid, and not a real one to be found in their great pathological museum? The inference is that they were mistaken in their real nature, that they were connected with the lymphatic glands, and on being referred to Robin, their eminent pathologist and microscopist, were rejected. It is the custom in Paris to refer all tumors to his inspection. The older professors have ignored the use of the microscope, and it is only quite recently that Mr. Sappey has placed in the Musee Orfila, microscopical preparations. This anomaly will soon cease to exist before the 'jeune ecole' of France, as it is called, which numbers men of the most enlightened and cultivated talents in pathology, such as Lebert of Zurich, Robin, Broca, Verneuil, Houel, Follin, etc., all of whom are determined at every opportunity to shed light on pathological anatomy, by microscopical investigations.

2d. Catalogue of the Museum of Wm. Hunter.

Not one word of any preparation of diseased parotid whatever.

3d. Pathological Anatomy, by Dr. Wilks, in illustration of pathological collection of Guy's Hospital, London, 1859, at p. 261.

"The salivary glands come next in my list, but I have not many morbid specimens of these to show you. Here is a specimen of calculus, (No 1784^{18} in the museum) from the sub-maxillary gland, the obstruction of the duct of which you know is one cause of ranula. From the same cause in Stenos' duct you may have salivary fistula, all of which affections you will hear of from the surgeon. Amongst the new growths affecting these glands is the fibro-enchondroma of the parotid, (No. 1784^{25} in the museum.) *One* specimen only. I do not think it is clearly made out where such disease first begins, although the glands are more or less involved. I have already alluded to this form of tumor in my first lecture."

This is the end of diseases of salivary glands, and not another word is said.

4th. Principles and Practice of Medicine, by Prof. J. Hughes Bennett, Edinburgh, 1859. (p. 200.)

"Cartilagenous growths were first described by Muller, under the name enchondroma. In the soft parts they *are surrounded by an envelope of cellular tissue,* and in the bones by a bony capsule. In the first case, they occur, *although very rarely, in the glands,* as in the parotid or mamma. In the second case they are most common in the bones of the extremities. The tumors may be round and smooth, or rough and nodulated from several of them being accumulated together. Though hard to the feel, they often present a peculiar elasticity. They crunch when cut with the knife,

usually present a smooth, glistening surface, and are not unfrequently more or less soft, pulpy, gelatinous, and even diffluent in some parts of their substance."

Again, at p. 202, "Enchondromatous tumors are continually mistaken for cancerous growths, a fact pointed out by Muller."

5th. *Paget's Surgical Pathology.* Mr. Paget was called by the council of the Royal College of Surgeons, London, to give a course of lectures in illustration of the pathological collection of the Hunterian Museum, the largest in the world. He not only drew attention in this course to the specimens contained therein, but also to those of other large museums, more especially to that of St. Bartholomew's Hospital, with the Medical School of which he is connected as Professor. He also refers to all the most reliable authorities in Europe. Let us now quote him. (p. 37, vol. 2.)

Serous Cysts. "In situation, too, they are various. In some cases they lie in front of the neck; in others; at one or both sides: they may lie by the lower jaw, *over the parotid*, by the clavicle, or anywhere or everywhere in the mid-spaces. And in any of these situations, they may extend very deeply, among the structures of the neck, and may adhere to them so closely, and may so thinly cover them as scarcely to conceal them when laid open. Their date of origin is very obscure. In many, perhaps in the majority of cases, they appear to be congenital; but they may be first observed at any later period of life. Last year, Mr. Lawrence removed a collection of four large cysts *from over the parotid gland and mastoid region* of a man, 28 years old, who had observed their beginning only seven years previously. Three of these were filled with serum, and one with pus."

Again, P. 49, Vol. 2. "In the parotid gland also, cysts containing fluid blood have peculiar interest. In 1848, I assisted Mr. Stanley in the removal of one which lay quite within the parotid of a gentleman about 40 years old. It had been for some years increasing in size. and lay beneath some branches of the facial nerve, from which the need of separating without injury made its removal very difficult. This, however, was safely accomplished, and the patient remains well. At nearly the same time, a man, 25 years old, was under my care with a similar cyst, which had been increasing without pain for two years. It lay in the parotid, but very near its surface. I punctured it, and evacuated two or three drachms of bloody-looking fluid, with some grumous and flocculent paler substance intermingled. This fluid coagulated like blood, and contained blood-cells, much free granular matter, crystals of cholestearine, and what appeared to be white corpuscles of blood acquiring the character of granule-cells. The cyst filled again with similar fluid after being thus evacuated. I therefore dissected it *from the parotid gland*, and the patient recovered."

At p. 201, vol. 2, of the same author.

Cartilaginous tumors *over the parotid.* "The only remaining instances of cartilaginous tumors to which I shall refer are those that grow *near* the parotid, or much more rarely, *near the* sub-maxillary gland." Again, p. 204. "Such are the most general character of these cells; *but they are apt to vary from them*, being more angular, or bearing processes, or being attenuated or

caudate. *Even, if we may consider them as imitating gland-structures,* yet it may be a question whether they are related to the adjacent parotid, or to *lymphatic gland.* It would be easy to discriminate between the elements of the parotid and of a lymphatic in their natural state; but a morbid imitation of either of them may deviate far enough to be as much like the other. And it is well to remember that these tumors have *exactly the seats* of naturally *existing lymphatic glands, and are often closely imitated by mere enlargements of these glands;* so that, possibly, future researches may prove that they are cartilaginous tumors *growing in and with a lymphatic gland,* over or *within the parotid,* or sub-maxillary gland."

P. 397. "A firm medullary tumor was *seated deep in the substance of a* young woman's parotid gland. Its removal with the knife *could not be safely completed; about a fourth part of it was left behind,* and the wound was left to heal in the ordinary manner. It healed quickly, enclosing the remains of the tumor; but after some time all the appearance of swelling subsided, and no renewed growth ensued till after a lapse of three months, when it was renewed, but not more rapidly than before."

Mr. Paget, you see, as I have already told you, says not one word in the whole of his work on diseases of the parotid gland, even enchondroma, which I admitted he throws very great doubt upon, and calls them *cartilaginous tumors over the parotid.* Mons. Houel, denies it "in toto," and says it has its origin in the areolar tissue. With the extensive means of illustration at Mr. Paget's command, he does not bring forward one case of malignant disease of the parotid. If neither museums, nor the soundest pathologists can furnish evidence of its disease, what rational conclusion can you come to, *otherwise than that they have no existence.*

In former editions of Dr. Druitt's "Surgeons Vade Mecum," he speaks of malignant diseases of the parotid, but in the later ones he carefully abstains from it, by calling them *diseases over the parotid.* It may be asked, why have I quoted some anatomists who belong to the past generation, and not any of the older pathologists, some of whom have an undoubted reputation? The reason is clear, simple and obvious. Since the days of Blandin and Colles, surgical anatomy has made *comparatively* but little progress, whilst pathological anatomy has made more rapid and brilliant strides than any other branch of medical science. To the microscope we are much indebted for clearing up the doubts which have so long existed as to the nature of morbid growths, by demonstrating their elementary structure. Of the works in pathology that I have quoted, the oldest is Paget, beyond which it would not be safe, in the present day, to refer as an authority.

4th point to which I beg to draw your attention is the following remark by Dr. Brainard: "M. Malgaigne, in his report to the Imperial Academy of Medicine, Oct. 26th, 1858, admits that in certain exceptional cases, on account of anomalies shown by dissections, the parotid gland may be completely removed without wounding the external carotid artery or the trunk of the facial nerve. This conclusion was sustained by the Academy. M. Naegale, as quoted by Velpeau, affirms that in the dead subject the gland may be dissected away without wounding the trunk of the nerve, and that he has removed it in the living without causing paralysis." In reply, I will admit that there are *in rare cases* some differences from the normal relation which the gland bears to the external carotid artery and facial nerve, but is any surgeon to take them into consideration when proposing to operate in this region? Are they frequent? For my own part I never met with such anomalies, and Mr. Malgaigne, (Traite d'anatomie Chirugicale, 2me Edn., Tome 1er, p. 799,) admits that Mr. Sappey, the most distinguished French anatomist, never met with a case in which *the external did not pass through the substance of the parotid.* The Academy of Medicine could also sustain with equal truth, that the external carotid itself *has been known to be entirely wanting.*

5th point. Dr. Brainard next refers to a case of cartilaginous exostosis, published by him in the *American Journal of Medical Sciences*, Oct., 1853, and the entire removal of the parotid "there is no room for doubt." On reading the paper, the only reference to the parotid is given thus: "The parotid gland had been *partially obliterated by pressure*, and no trace of it now remained."

He admits then, he did not remove it; at least, that is the conclusion I draw.

6th point. He says, "If A. Cooper, Beclard, Larrey, Warren, Mott, McClellan, and the scores of surgeons who, knowing the controversy on the subject, have reported operations of the kind, are not to be credited, it will be difficult to find any reliable authority in surgery." In reply, I would say, that if all the most distinguished anatomists, pathologists, and the most eminent surgeons of modern times, whom I have quoted,

knowing the controversy on the subject, have denied that they have ever met with any disease of the parotid, (excepting enchondroma) and thrown grave doubts on the so-called extirpation of the parotid, *are not to be credited, it will be difficult to find any reliable authority in surgery and pathology.*

7th point. He says he can report above fifty operations of what he deems undoubted cases of removal of the parotid gland. He also states that he has operated upon five himself.

You have heard me quote Fergusson, Liston, and Velpeau, on this point, who affirm that they have *never met with a single case of a diseased parotid.* Now Gentlemen, seriously and solemnly, do you believe Dr. Brainard before the united and unequivocal testimony of these, the three most eminent operating surgeons of modern times, *if so, there is no other alternative than to admit that Dr. Brainard is the greatest surgical genius, not only of the present, but of every age and country.*

8th point. He writes, "I have added figures of some of the tumors, taken by daguerreotype, believing they would be useful in aiding the diagnosis, for I have generally noticed that each organ in its morbid growth assumes a form peculiar to itself, and believe that careful attention will enable the surgeon to distinguish between enlargements of the parotid and those of the glands situated in contact with it, *by the form and situation alone.*"

It may serve to point out *the difference in situation of a tumor*, but it is an absurd error to insist upon it as an aid to diagnosis between a diseased parotid and lymphatic, and more especially as the existence of the disease in the parotid has been strongly denied by the most competent authorities.

9th point. Description of his two cases of extirpation of the parotid.

Case 1.—*Removal of the Parotid Gland for Scirrhus—Cure.*—Rebecca Dearsdorff, aged thirty years, of full habit and good health, consulted me, January 30, 1857, on account of a tumor situated between the ramus of the jaw and the lobe of the ear. The attention of the patient was first directed to this tumor four years previously, when only a slight enlargement existed. From that time it increased slowly and without any pain until within three months, when it has grown rapidly, and now presents the appearance well represented in the foregoing figure. The Tumor at this time is firm to the touch and presents some inequalities; the skin over it is not discolored.

Operation.—The patient having been placed under the influence of chloroform, a semi-circular incision was made, commencing behind the lobe of the ear, ending upon the middle of the cheek, and passing over the lower part of the gland. The covering having been dissected up from below, the finger was thrust beneath the tumor, by which, with an occasional touch with the knife, it was readily separated from its attachments.

A circumstance especially deserving of notice is, that *the fissure in which the gland is naturally situated was nearly empty, and the finger passed into it without difficulty.*

During the operation, the portio dura was divided; the external carotid artery was torn across, and the end of it lay in the lower part of the wound, three-fourths of an inch in length, where it had been drawn out of the tumor. It did not bleed, but as a precaution, it was tied. The face was instantly drawn to the opposite side on the division of the nerve.

On examination of the cavity, the ramus of the jaw, the mastoid process, the styloid process in its whole length, the stylo maxillary ligament, the auditory passage, and the ligament of the temporo-maxillary articulation, were fully exposed. At the bottom, the internal carotid artery and the internal jugular vein were distinctly seen and felt. There was no great hemorrhage. The wound was filled with a sponge until this had entirely ceased, when careful search was made by the surgeons and assistants for any remains of the parotid gland. None could be found; all the spaces into which it is said to prolong itself were vacant. The wound was dressed in the usual way, and a full dose of morphine administered.

On examining the tumor, the structure of a salivary gland was distinctly to be discerned on its entire surface. The trunk of the portio dura passed through it. The central part seemed to me very decidedly scirrhus.

The operation did not occupy ten minutes, and was by no means very difficult. The reason is that during its growth the disease had gradually raised the gland from its bed in a manner which will be readily understood. The patient recovered, and was able to return home in two weeks.

Case 2.—S. S. Millard, aged thirty-five years, consulted me, Nov. 10, 1858, on account of a tumor situated below the left ear. He stated that he had first perceived it about two years previously, and some months since an attempt to extirpate had been made, but the surgeon, finding it deeper and more difficult to remove than he anticipated, desisted, after having cut deeply into it, and contented himself with applying cupping glasses over its surface, by which a small part of its contents had been forced out. The wound cicatrized slowly, and at the time of examination, an irregular surface was presented, and elastic, free from tenderness and pain. The general health was pretty good.

This tumor was removed, Nov. 13, 1858, at the U. S. Marine Hospital, in presence of the class and attendants. Owing to the cicatrix upon the surface, a piece of the skin was removed. I succeeded in getting under it at the lower part and raised it out of its bed by the fingers. There was considerable hemorrhage. The external carotid, the temporal and external maxillary arteries requiring ligatures; the two latter on account of the retrograde circulation. The pharynx, internal carotid artery, internal jugular vein, the pterygoid muscles, were distinctly felt and seen.

The patient recovered without accident, and, Oct. 16, 1859, writes that "my face is apparently well."

On examination of the tumor, it was found to be of a marrow-like appearance, with masses firmer and apparently more fibrous than the rest. The facial nerve passed through it. (The side of the face was paralyzed after the operation.) Surrounding the morbid growth, small portions of the parotid gland, in a healthy state were noticed.

The character of the growth would have left me in doubt as to the malignancy; but the cicatrization after the first incision, and it having remained well for eleven months, leads me to think it was not cancerous.

In this case, the lymphatic glands removed with the tumor were healthy, and the disease seemed evidently to have originated in the parotid. I therefore took great pains to search for any parts which might have remained, and a small piece upon the side of the face was detected and removed after the principal growth had been taken out."

Comments on Case 1*st.*—No good surgeon, anatomist and pathologist will believe that in this case the parotid was implicated and that he extirpated it. Does he really believe it himself, or is he imposing on the credulity of the profession? If so, it is an insult to their intelligence. "With an occasional touch of the knife, it was readily separated from its attachments, there was no great hemorrhage, the operation did not occupy ten minutes, and was by no means very difficult." You have heard the unanimous testimony of all the great anatomists whom I have quoted on this point; every one of them are also distinguished surgeons, either living or dead. How emphatically they have insisted on the great danger, difficulty and violent hemorrhage from extirpation of the parotid. Now do you believe Dr. Brainard in opposition to their united experience? He admits that Velpeau and Beclard cast doubt *on all cases* in which no great hemorrhage occurred; likewise that Beclard and Lisfranc lost their patients by such an operation. Speaking of the removal of the parotid, Dr. Brainard says that Hiester, "describes an operation in which a pound of blood is lost during the incisions, in which death often occurred, and that he criticises Gurengeot who had spoken of it as not dangerous." Dr. Brainard adduces this as a proof that Heister really removed the parotid.

In describing his case, Dr. Brainard says, "the external carotid *lay in the lower part of the wound, for about three quarters of an inch in length*, where it had been drawn out of the tumor. I doubt very much that an artery of the calibre of the external carotid can be severed, and lie denuded for three quarters of an inch *under the circumstances stated, without the slightest hemorrhage*, for the patient was not in a state of syncope, nor was the artery retracted in its sheath, or beneath the fascia.

A diseased parotid, according to Dr. Brainard, is much easier to dissect out than a healthy one! He gives as a reason that the disease had gradually raised the gland from its bed! No doubt an enlarged lymphatic gland in the parotid region, if not very voluminous, is far easier to extirpate than a healthy parotid, but I must protest against the absurd error, that a diseased parotid, supposing it to exist, would be more facile to dislodge than a sound one. A mere tyro in surgery would waver before admitting such an assertion.

He draws particular attention to the following remark: "the fissure in which the gland is naturally situated was *nearly* empty, and the finger passed into it without difficulty." This proves nothing, as all surgeons have insisted that tumors occupying the parotid region, cause the absorption of the parotid and came to occupy its natural seat.

Again, he says, "on examining the tumor the structure of a salivary gland was distinctly to be discerned on its entire surface." Admitting it to be the salivary gland which was seen on the surface, might it not have been a tumor of a deep lymphatic gland, pushing *forward* the salivary gland, which was in a healthy state.

Comments on second Case.—The same remarks will apply to the second as to the first, with the exception of the hemorrhage which appears to have been considerable. He says, "I succeeded in getting under it at the lower part, and raised it out of its bed by the fingers." Could he have done so had it been the parotid? He admits that it was a most easy operation. No microscopical examination was made of the tumors. It is a very meagre, loose and faulty description, no surgeon reading it would suppose that it was a case reported by a professor of surgery, and there is no conclusive evidence whatever that the parotid was at all implicated.

Comment on case 4.—Enlargement of the Lymphatic Glands in the Parotid Region.

"After the operation was finished, the parotid gland was found in its natural situation, *but so much scooped out* that it was perhaps *possible to have supposed that part of it had been removed.*" Here is an important admission by Dr. Brainard,

viz: that enlargement of lymphatic glands may cause absorption and take the place of the parotid. Now, was it not so in the other two cases?

Analysis of facts and summary. To support my argument that the *entire removal* of the parotid is a most dangerous operation, and attended with the greatest difficulties, in opposition to that of Dr. Brainard, who contends that it is an easy, safe operation, and one which is not unfrequently attended with but little loss of blood, I have given you my own deductions from dissections, and quoted as anatomical and surgical authorities, the Cyclopœdia of Anatomy and Physiology, Burns, Colles, Harrison, Blandin, Cruveilheir, and Richet.

To support my argument as to whether the most eminent surgical authorities of modern times, *have ever seen a case of diseased parotid,* in opposition to Dr. Brainard, who asserts that he can report above fifty operations of what he deems undoubted cases of removal of the parotid, and has operated upon five himself, I have quoted Fergusson, Liston and Velpeau.

To support my argument as to whether the parotid gland is subject to malignant disease or not, in opposition to Dr. Brainard, who teaches that doctrine, I have quoted the records of the Musee Dupuytren, catalogue of the Museum of Wm. Hunter, and also the unmistakable evidence of the most eminent pathologists, such as Houel, Wilks, Bennett, and Paget.

What is the use of extirpating the parotid, if it does not take on disease? (always reserving enchondroma, and which is spoken of as rare.) From all these considerations, I contend that I have proved beyond the possibility of a doubt, that Dr. Brainard, in the two cases he describes, did not extirpate the parotid; what he thought was the parotid was only a tumor *placed over the parotid, or occupying its place,* and from the unanimous testimony of the anatomical and surgical authorities that I have quoted, prove that such tumors are usually easy to remove, from being limited by a cellular capsule, from which they ordinarily can be enucleated with facility, and that they may or may not implicate the external carotid artery and facial nerve. I also maintain earnestly the justification of this criticism, inasmuch as I think the proofs are irrefragable that Dr.

Brainard is, *on this subject*, in ignorance of the teachings of anatomy and sound pathology, that he is professing dangerous and erroneous doctrines in surgery, and advocating them to the profession.

NOTES ON SURGICAL CASES.

BY E. ANDREWS, M. D.

Prof. of Surgery in the Medical Department of Lind University, Surgeon of Mercy Hospital, and Surgeon of Chicago Dispensary.

Lithotomy.—Joseph C., aged 9 years, was admitted to the Surgical wards of Mercy Hospital, on the 10th of December, complaining of incontinence of urine. The penis was small and club shaped, the glans being a little enlarged. He complained of pain in the extremity of the organ, which, however, was not inflamed. The pain was aggravated upon effort at walking or running, and the clothing was wet with urine. I introduced a sound and immediately struck a calculus of considerable size. After a few days preparatory treatment, I brought the patient into the operating room and proceeded to remove the stone in the presence of the students in attendance. The rectum having been previously evacuated, the patient was placed upon the table, chloroform was administered, and the bladder filled with an injection of tepid water. The staff being introduced, I proceeded to perform the lateral operation of lithotomy in the usual manner. The stone, on being extracted proved to be a trifle larger than I had estimated it, being an inch and a half in length, by an inch in breadth. It consisted of alternate layers of uric acid, and phosphates with a uric acid nucleus. A silver tube was inserted in the bladder and the patient replaced in bed. A moderate febrile reaction followed, but at the present time (fourth day after the operation) the symptoms are entirely favorable, and the patient bids fair to have a rapid recovery.

Necrosis of the Femur.—Edward Boothe, of Gardner Station, Ill., aged 11 years was admitted to Mercy Hospital with a diseased femur. On examination with the probe, necrosed

bone was found in the lower third of the shaft. The knee joint was not affected, but the femur for seven inches above it was much enlarged. Owing to the excellent management of Dr. Rogers, his family physician, the patient was in the enjoyment of a tolerable degree of vigor, notwithstanding the free suppuration which had continued for many months.

I proceeded to remove the sequestrum. A longitudinal incision, five inches in length, was made on the antero-internal aspect of the thigh, down to the bone, crossing one of the sinuses in the track. At the bottom of this sinus a small opening was found leading into a perfect shell of bone, within which the probe detected the sequestrum. I enlarged the opening with the gouge forceps and drew out several fragments of necrosed bone. The cavity in which they lay was about an inch in diameter, four inches long, and cylindrical in form. There were only three very small openings into it. It was obvious that the whole thickness of the lower third of the shaft of the femur had perished down to the epiphysis, and that the periosteum separating from it, had produced this bottle shaped shell of living bone around the sequestrum. Chloroform and aether mixed were administered during the operation. Nothing remarkable occurred during his recovery, and at the present time the incision is rapidly healing.

Strangulated Hernia. I was called into the country some twenty miles to see Daniel Wilson, aged 66, who had been lying several days with a strangulated inguinal hernia on the right side. I arrived at midnight, and found the patient as above described. Desirous to accomplish a reduction, if possible, without an operation, I administered chloroform to complete anæsthesia, and resorted to the taxis. The relaxation produced by the chloroform was perfect in the general system, and impressed me very favorably as an agent suitable to be used for this purpose. The structure, however, did not yield, and the attempt was like the previous ones made by Dr. Jones, his family physician, a failure. I proceeded to operate therefore in the usual manner. The sack on being opened contained some clotted blood and serum, and there was considerable fresh lymph gluing the intestines to the sack. There was

however no gangrene, and I therefore divided the stricture and returned the gut. There was no serious inflammation and the patient recovered, with a radical cure of the hernia.

Congenital Hernia Strangulated.—John H. aged 14, was attacked with a great pain in the groin and scrotum. On examination by his physician, a moderate tumor was found in the scrotum, very hard and elastic, and connected with the external ring by a long and somewhat slender process feeling like a swollen spermatic cord. The patient could give no intelligible account of the history of the case, seeming to be unusually stupid. No testicle could be identified apart from the tumor, so that the physician in attendance was in doubt whether it was a case of hernia or of orchitis. The administration of several brisk cathartics, which only resulted in vomiting and pain, cleared up the matter, and he requested me to meet him and operate. After administering chloroform and ether in equal parts, I made an incision down to the swollen cord. Here I found the intestine stretched in a straight line, from the tumor below to the external ring above, apparently being strangulated at both places, but most firmly below. I divided the upper stricture first, and dissected down to the lower, and divided that also. The gut below the latter point was contained in the sack of the tunica vaginalis, and was a good deal ecchymosed. The strangulation being relieved, the intestine was returned and the parts healed up as usual. There was some local peritonitis, and for several months a good deal of pain on walking, or in any other way moving the body. As this soreness was slow in subsiding, the friends of the patient killed a plump dog, and having extracted his oil they rubbed the patient with it daily. As the soreness afterwards subsided, the dog got more credit for the cure than the surgeon, and the oil of dog is in high repute in that locality to this day.

Fracture of the Pelvis.—The patient, a very highly esteemed citizen of V—, Ind., was caught between the side of a freight car and a platform at the station house, in such a way as to compress the lower part of the pelvis, but it was not possible to ascertain the exact direction in which the force was applied.

He was carefully examined and attended by Drs. Cameron and McCarthy, but there was no crepitus, nor other external sign of fracture which the most attentive external examination could detect. The catheter was introduced without difficulty into the bladder, and a pint of pure blood flowed off, but no fragments of bone were touched by the instrument, nor could the finger in the rectum detect any. It was hoped, therefore, that no fatal injury had been done.

A difficulty of expelling the urine supervened, and in a few days a tumor appeared in the hypogastrium like a distended bladder. At the same time, œdema of the perineum and of one thigh took place. As the catheter did not reduce the distension of the bladder in the least, although often introduced, Prof. Davis and myself were called to consult in the case. On my arrival the patient was found delirious, and in a very unpromising situation. A careful examination, by introducing the finger into the rectum while the catheter was passed, showed that the instrument made its escape from the urethra at the membranous portion, and passed into the areolar spaces of the pelvis, confirming the suspicions of Dr. Cameron, who had not been able to introduce the instrument in a satisfactory manner after the first or second day from the injury. As no positive sign of fracture could be discovered, I hoped that the rupture of the urethra was the result of a contusion of the soft parts only, and as by no care could the catheter be made to enter the bladder, I determined to relieve that viscus, and also prevent further infiltration of urine by an operation. Chloroform and æther being administered, I introduced a grooved staff and cut down upon it, as in the lateral operation for lithotomy. The staff was found in a cavity from which a gush of urine took place. After this gush, the bladder emptied itself with a free and steady stream, which seemed to come from among the crushed fragments of the prostate gland. On passing my finger along the inner border of the left ischium I found a rough surface from which a large splinter of bone had evidently been detached; tracing the route of this splinter forward and upward, I at length found it lodged with surprising firmness at the brim of the pelvis, between the bladder and

the pubis. It was thin and sharp at the edges, and above two inches and a half in length by an inch or more in breadth. The urethra and prostate gland had been completely destroyed in the path, and other tissues surprisingly cut to pieces, but the coats of the bladder were apparently not pierced. After the operation the patient seemed relieved in a measure of his sufferings, become more rational, and had something like a natural sleep. The urine continued to come away freely by the incision, but there was no permanent improvement and the sufferer died on the following day.

Fracture of the Pelvis from a fall.—J. H. a sailor, fell from the mast head of a schooner, and struck the nates upon the deck. I did not see the patient alive, but was present at the *post mortem* examination. Both of the ilia were fractured just external to the sacro-iliac synchondrosis, so that the sacrum was freely movable. The viscera of the pelvis were not wounded, and the sacro-iliac synchondrosis itself remained uninjured, showing the great strength of that articulation. I was not informed of the symptoms preceding the death.

NOTES UPON DIPTHERIA.

BY J. H. HOLLISTER, M. D.,
Professor of Physiology in Lind University.

At a recent meeting of the Chicago Medical Society, Dr. Hollister made a verbal report of some interesting cases of diptheria, accompanied by a specimen of false membrane of such remarkable development, that by vote of the Society, he was requested to furnish a written history of the case, with such notes upon the disease in question as he might deem proper. To which request he replies:

Gentlemen, I herewith present the history of the case of diptheria, to which I alluded when exhibiting a specimen of false membrane, at the last meeting of the Society.

The patient, George F., was a well formed, robust boy, aged 7 years. I first saw him at evening, October 4th, 1859. He had suffered severely from chills during the afternoon; febrile reaction was now apparent; the face was flushed; the skin hot

and dry; tongue red, and but little furred; pulse 110; complained of head-ache and general languor. There was at this time no indication of local disease, and I suspected it merely the result of a sudden cold, perhaps attended with the congestion present in ague, and so frequently observed as complicating most diseases in that part of the city. I saw him again early, October 6th. He now complained of soreness of the throat; had the peculiar hoarse cough as in membranous croup; the neck, externally, was much swollen; the tonsils were much enlarged, and together with the adjacent structures, white with plastic lymph. The palate and anterior portions of the mouth were extremely red; the breathing hurried; pulse 120. Though at my first visit there was nothing of a local character complained of, there was now no chance of mistaking a well marked case of diptheria.

My prescription: ℞ Ipecac, grs. v.
Sub. Mur. Hyd. " x.
M. Div in Chart No. x.

Sig.—One every two hours.

Had reference to the sedative effect of the first and the power of the second, to prevent fibrilation of the effused lymph, and thereby favor its expulsion.

The throat was sponged every four hours with a solution.

℞ Argent Nitr ℈i.
Aqua Dist. ℥i. M.

Chlorate of Potash in solution was used freely as a gargle, and the external surface, a little distant from the trachea, subjected to counter irritation.

Twenty-four hours later, Oct. 7th, Prof. Davis saw him with me in consultation. The breathing was now more labored. I had previously produced emesis by the use of ipecac, with no apparent relief. The febrile symptoms had very much subsided. The blood was not duly oxidized, and he was evidently failing, with all the appearances of asphyxia. During the last twelve hours, I had detached firm patches of false membrane when using the sponge, some of them an inch in length.

It was suggested to use R. Sub. Sulph. of Mercury, grs. iv. one powder every four hours, with the two-fold view of dis-

lodging the false membrane, and by its alterative effect, to pre vent fibrilation of the effused lymph.

At evening, after a terrific effort which nearly proved fatal, he succeeded in expelling a perfect tubular cast of the *trachea*, measuring seven inches in length, to the bifurcation, the exact representation of these and a tuft at the extremity of either one, which proved upon examination to be the bronchial subdivisions, thirteen in number on one side, and eleven on the other, each from one-fourth to one-half inch in length. *He now rested more quietly*, breathing with comparative ease, till near the morning of the 9th. We endeavored to sustain him as he seemed much exhausted. The imperfect aeration of blood was now very apparent. Twelve hours after the expulsion of the first specimen shown you, he threw off the second one, which was a likeness of the first, much less perfectly developed, and evidently from the upper portion of the trachea.

During the day his suffering was paroxysmal, at times rendering him almost frantic, permitting brief intervals of rest. His mental faculties seemed entirely unimpaired. He was fully conscious of all that occurred till three o'clock, P. M., when a suffocating paroxysm in a few moments ended the scene and the little sufferer was at rest.

A case of equal interest in the same family, but with very different symptoms, will be submitted at the next meeting.

CHICAGO ACADEMY OF MEDICAL SCIENCES.

DELASKIE MILLER, M. D., PRESIDENT.

The regular monthly meeting was held on Friday, Jan. 6th, when the following officers were elected to serve during the ensuing year:

President—Dr. R. C. Hammill. *Vice-President*—Dr. I. A. Graham. *Recording Secretary*—Dr. Walter Hay. *Corresponding Secretary*—Dr. Jno. H. Rauch. *Treasurer*—Dr. Thos. Bevan. *Trustee*—Dr. Chas. G. Smith.

The following Standing Committees were also chosen:

On Admissions—Drs. Heydock, McAllister, and Holmes.
" *Medical Ethics*—Drs. Bloodgood, Fisher, and O. Smith.
" " *Education*—Drs. Davis, Ingalls, and Gore.

A vote of thanks was given to the retiring officers.

Dr. Bloodgood (from Board of Trustees) reported that they had found suitable rooms for the permanent location of the Academy, and were thereupon authorized to secure such rooms as in their discretion might seem best, at a rent not to exceed $150 per annum.

Dr. Rauch moved that the Academy subscribe for the principal Medical Periodicals.

Dr. Byford moved an amendment to the effect that publishers be requested to donate, which was passed.

Dr. Rauch suggested the necessity of Incorporation in order to effect this object, whereupon the Secretary was instructed to take the necessary steps to effect the Incorporation of the Academy under the general Law of Incorporation.

Dr. Blake proposed the following resolution: *Resolved*, That Tracheotomy is usually deferred too long in cases of membranous Croup, and that if resorted to earlier it would greatly lessen the mortality in that disease," which was accepted, and Drs, Bloodgood and Blake were appointed to discuss the subject at the next regular meeting.

Dr. McAllister called attention to a verdict of a Coroners Jury, which had come under his notice, "That the subject died from disease of the stomach," no post-mortem examination having been made to determine the fact.

Dr. Gore (County Physician) had seen the case, and stated that no post-mortem examination was permitted by the parents of the boy; that the "verdict" in question was made up from the opinions of two physicians, who were said to be acquainted with the facts of the case, and from marks of violence upon the body, viz: an abrasion of the skin, and was that "The boy came to his death from internal injuries, (probably with hemorrhage) the results of a fall upon the edge of a portion of a barrel, while engaged in feeding cows." He also remarked upon the unreliable character of reports of such verdicts as published in newspapers, and assigned the reasons.

Dr. McAllister thought that juries were not justified in giving such verdicts without having post-mortem examinations.

Dr. Davis denied the right of parents, or any one else, to

interfere with the rights of juries, maintaining that the subject of such an investigation belonged to the jury alone.

The subject was discussed at large by Drs. Davis, Blake, Gore, Ingalls, and McAllister.

Dr. C. G. Smith suggested the propriety of exerting the influence of the Academy as a body in procuring the election of a physician to the office of Coroner.

Drs. Davis and Ingalls were appointed a committee to investigate the subject of abuse in the practices of Coroners Juries.

Dr. Bloodgood submitted the following report of the section to which the subject had been referred, viz:

The signs usually indicating death by drowning are the following: When found soon after death the surface of the body is pale or slightly livid, with muscular rigidity more or less complete, according to the time that has passed since the immersion took place; the eyes are partly open, and the pupils dilated; the tongue is pressed against the teeth, or protruded between them, and sometimes wounded by them. The ends of the fingers are often abraded by the efforts made in the death struggle; the hands enclose grass or other substances that come within their reach, and the hollows of the nails are filled with sand or mud that forms the bed of the water. The abdomen and chest are prominent. The lungs and right side of the heart are filled with black fluid blood, as are also the liver and spleen, and a small quantity of bloody urine is sometimes found in the bladder. The stomach contains water of the same nature as that in which the body is found, and the air passages are more or less filled with froth formed by the water drawn in by the inspiratory efforts, and mingled with the air already present. The air found in the lungs is almost wholly destitute of oxygen. According to Prof. Beatty there is turgesence of the blood vessels in the head, more or less complete as the death has been more or less speedy; but Dr. Goodwin, as quoted by Roget, says that the external surface of the brain is of a darker color than usual, but the vessels are not tinged with blood, nor are there any marks of extravasation about them. Dr. Currie also says, they do not exhibit any particular marks of distension, and Dr. Guy, that they contain a small

quantity of blood, and the medullary substance presents, when sliced, a number of bloody points. With these latter authorities we are inclined to coincide.

When all these signs exist, with the absence of wounds or other injuries which might account for the death, its cause cannot be a matter of doubt, but the signs are sometimes wanting, and sometimes their presence admits of another explanation. When syncope occurs at the moment of immersion, we may have no evidence of death by drowning, except the finding of the body in water, or if in falling from a height the head strikes a rock, producing concussion of the brain, or in a state of deep intoxication the subject is accidentally or wilfully thrown into the water. But though the want of any or all the ordinary signs, do not absolutely disprove the theory that drowning was the cause of death, the coincident presence of two of them, even when conjoined with a mortal wound of the head, would, we think, furnish very strong proof that death was caused by drowning, and in the absence of conflicting circumstances, other than the wound, justify a verdict to that effect. These signs are the presence of water in the stomach, identical in composition with that in which the body is found, and the presence of a quantity of froth in the air passages. The value of the first and most constant sign, is much impaired by the difficulty of determining whether the water was introduced before or at the time of death, and also by that of proving its chemical identity with that in which the body is found. The other, however, is very significant, and can be produced only by the simultaneous presence of air and water in the lungs while they are still in motion. The presence of water unmixed with air, would prove that it had flowed in after respiration had ceased. The danger of confounding the expectoration of pneumonia or bronchitis with the froth produced by drowning, is very small, on account of the different characters of the fluids, and we think could almost always be avoided by a careful examination of them. The presence of what any one would regard as a mortal wound, would only serve to throw light upon a case that would otherwise be doubtful, not to disprove positive facts. The subject of the celebrated Crow-bar Case,

would have died by drowning had he been immersed long enough at any time subsequent to the accident from which he suffered, though he had a wound which no surgeon would have hesitated to pronounce speedily fatal. We therefore think that the presence of froth in the air passages, is a certain sign of death by drowning, subject only to the condition that water was not injected into them before death."

ABSTRACT OF PROCEEDINGS OF THE CHICAGO MEDICAL SOCIETY.

The society met at the residence of Dr. W. W. Allport, Tuesday Eve., Dec. 29, Dr. Waite in the chair.

Members present: Drs. Allport, Byford, Wickersham, Heydoch, Graham, Fisher, Powel, Faircloth, Isham, Andrews, Deville, Holmes, Davis and Steele. Visitors: Prof. Allen, Rea and Dr. Mott.

The Sanitary Committee on request, begged leave on the part of Dr. S. Wickersham, of the South Division, to report the following:

"The diseases with which we have met, have been those of the corresponding months of other years. In our July report, we stated that about the usual number of children are suffering with the disease peculiar to the season. Many of these have gone to their final home, others are stout and healthy, and a small percentage are still the victims of chronic Diarrhœa, or secondary disturbances which prevent a return of the healthy aspect, and joyful laugh. Another seasons experience has but added to our conviction, that in these cases we should beware of medication and trust more confidently to hygienic measures, give increased attention to dress, aliment, air and bathing. By a judicious administration of medicines, much may be accomplished, but let them be dealt out with caution, and ever remembering that attention to the above is a *sine qua non* to a successful treatment. Without pausing to detail treatment, I would simply state that with those cases of chronic diarrhœa and emaciation with which we so often meet at this season of the year, there is no simple remedy upon which I place more

reliance, than the tinctura cinchonæ comp. This remedy in most cases given in doses of from 20 gtts to a drachm will be found very beneficial.

Comparatively but few cases of dysentery have occurred during the season. I believe it was the most prevalent about the middle of September. It will be remembered that about the 10th, we had copious showers, which was the termination of the dry weather. Immediately succeeding the rain we saw a large additional number of cases of dysentery and remittent fever, and these of a more obstinate type than those which we had previously seen. Until this period I had seen no case of dysentery that gave me any uneasiness, but in the interval between the 10th and 25th, I met with several cases that gave me some anxiety, and required additional care in the treatment. I lost but one adult, I had his disease controlled at two separate periods, but from violation of my instruction, in eating fruit etc., he passed into his second relapse which proved fatal. Remittent fever was not prevalent until after the September rain, when in two days immediately succeeding the rain, I took thirteen cases under treatment, showing that nothing was wanting for the production of the disease but moisture. These in most instances were easily managed. We saw no case if not already arrested, but what was converted in a very few days into an intermittent. Our plan of treatment is to relieve the bowels, to obtain by diaphoretics, a distinct remission, and administer an anti-periodic.

Intermittent fever in other years that we have practiced in Chicago, has prevailed to a considerable extent along the southern boundary of the city, more particularly to the part adjacent to the river. Not so this. There have been isolated cases throughout the south division, but the majority have been connected outside of the city. We have never seen but one case and that a recent one, that was not easily arrested by the quinine sulphas, after properly preparing the system for its reception. It was the case of a girl about fourteen years of age, who I had under treatment in September. It was at first a remittent. After three days the intermission was marked. The sulphate of quinine was given in the intermission, at first

in moderate doses, failing to arrest it, it was increased so as to produce its characteristic effect upon the brain, and was sustained for several days, during which it was arrested for one day only. The fever came on every evening about 8 o'clock. Prof. Wood says that he has never seen but some three cases, that the quinine sulphas did not arrest, and those when a young practitioner, and believes that he did not give enough of the remedy, but had he seen this case, I think he would have been satisfied that he had seen a case in his older days that the remedy would not effect. I then administered the liquor potassae arsenitis in eight drop doses three times each day, this was given about a week, when odema about the lower eyelids was perceptible. The system being now sufficiently under its influence, and it being necessary to suspend the remedy, and as no impression apparently had been made upon the disease, I was at a loss to know what to select amongst the many reported articles.

At this juncture, meeting with my friend, Prof. N. S. Davis, I detailed the case to him. He told me he thought I had better administer the cornus florida, and I understood him to say that he was accustomed to give it when the sulphate of quinine failed. I should have followed his counsel, but when I returned the next day I learned that her attack escaped the previous night. No further medicine apart from some ferruginous preparation was given, and she has had no symptoms of a return. In this case the arsenic proved eminently superior to the quinine.

During the latter part of September, and early in October, cynanche parotidea or mumps, prevailed extensively in some isolated sections of the South division. In the district bounded by Twelfth on the North, and State on the West, these were of the most violent form that I have ever witnessed. I will not weary you by a detail of the symptoms and treatment, but will give you an idea of the violence of them, by saying that in three children the parotid suppurated, and in one of these the gland on both sides; and another succumbed while the gland was undergoing the suppurative process. I would say here that I was not mistaken in my diagnosis. This was not accompanied by any form of angina or diptheria. But it was

pure and uncomplicated mumps. The throat was scarcely altered from health, and deglutition was attended with but slight pain. It is very rare for the gland to suppurate while affected with mumps. Prof. Wood says in his work on practice, that he does not remember to have witnessed a case where this has occurred. These were the first that I had seen. I lanced the glands as soon as the presence of pus was undoubted, and the quantity that was discharged for some days is scarcely credible. Active stimulation was required to support the strength while the gland continued to discharge, and it left the children very much debilitated. It is proper to say that I did not see these cases in time to adopt any effective means to prevent the suppuration.

From such knowledge as I have obtained from my medical friends, and my own personal knowledge, I am happy to be able to inform you that there have been but few cases of enteric fever, and these generally of a mild type, and terminating favorably a few days sooner than usual. The cases that we have seen have needed but little medicine. We view the disease as self limited, and think the physician has accomplished all that he can when he places and preserves the system in the most favorable condition for the elimination of the morbific matter upon which the fever depends.

We believe that a large number of our cases of typhoid fever of this region are not of that pure character that we meet with in the East. A very large proportion of the cases that I see are a mixture (especially in the early stages) of remittent and typhoid, hence we have our advocates of quinine, and much good will be accomplished by its administration in such cases, until that part of the affection which is not typhoid is overcome; your patient you deem convalescent, and perhaps leaves his bed for a period, but he is certain to return, and destined to pass through with an attack of typhoid fever, which, so far as the eradication of the disease is concerned, quinine is of no utility. We have recently seen the case of a lady where this malarious influence became manifest about every seventh day, and this throughout a six weeks attack of typhoid fever. The sulphate of quinia, as often as it recurred, was given with the

most marked effect, indeed would completely arrest the intermittent fever coming on every other day. But we failed to observe the least amelioration of the typhoid symptoms during the administration of the antiperiodic. Hence we use it only as a stimulant in enteric fever.

Perhaps I should not close this report without a word in reference to diptheria. We believe that our people are unnecessarily frightened. We have seen but one case that deserved the appellation. We have seen several cases during the autumn of pseudo-membranous croup and kindred diseases, but the tendency among the "similia" school is to pronounce all these diptheria, and also in many instances picture this as a new and very dangerous affliction. To all of which we very respectfully beg to take issue, and express as our decided conviction that the cases of pure diptheria have been very few."

Also, Dr. Holmes, of the North Side, reported as follows: "The facts which I have been able to collect from my own observation and inquiries, regarding the sanitary condition of the North division, can scarcely add anything of interest to the statements in my last report. The people have still been blessed with almost unparalleled exemption from sickness. Although the last three autumns have been to a great extent free from severe epidemics and fatal disease, the present season, I am sure, has even been more favorable to health. Whatever may be said regarding this general good health of our city, and the comparatively small amount of business done by physicians and apothecaries during some of the months, it is true, I suppose, that the bills of mortality for corresponding months of the two or three years past do not differ to a very great extent; it is said the number of deaths continues nearly the same. How this is to be accounted for, whether by an increase of population or otherwise, I am unable to say.

In the neighborhood of the sands there has been considerable intermittent fever, principally however among those who have had the disease before. In other portions of the North division, also, I have seen a few cases. In the same locality I have met with typhoid fever. The type of disease in my practice, however, has not been in general typhoidal.

Sore throats, with swelling of uvula and tonsils, have been quite frequent; but I have not met with any case of diptheria, nor of scarlet fever, or measles.

One of my cases of typhoid fever I consider somewhat singular, and therefore will give a brief report. An Irish woman, aged 38, was taken sick immediately after the recovery of her husband, whom I had treated for intermittent fever. She had been complaining of weariness and fatigue for several days before I left her husband. She grew worse, and was obliged to keep her bed nearly all the time for a week before sending for me, although she did not feel very badly, unless she sat up. At this time I found her with all the symptoms of mild enteric fever. She did not complain of much uneasiness; rested quietly, and thought she would be about in a few days. The pulse was 96 and small. Tongue was not much coated, but red at the tip and along the edges. There had been considerable diarrhœa, with slight tenderness in right iliac region, but scarcely any tympanitis, perhaps no more than is often found in health. The general appearance and spirits of the patient were so good, that I only prescribed QUININE, with opium and potass. chlo. in the intervals. I allowed a little weak beef tea and gruel. The case continued for a week in a most favorable condition. All the symptoms had improved; the patient had gained so much strength that she wished to sit up. I discouraged anything of this kind. On the eighth day, at my usual visit, I found her in a state of complete collapse; extremities cold, lips livid, wrists almost pulseless, countenance anxious and pinched. The abdomen was not in the least tumid or painful on pressure. Patient still retained her consciousness to the fullest degree, and seemed to know the danger of her condition. In spite of all treatment and stimulants she continued to sink for thirty-six hours, at the end of which time she died. This case, I imagine, was an example of that flattering and yet dangerous form of typhoid fever, in which ulceration of the bowels perforates the tissues, with scarcely an appearance of danger till the state of collapse, suddenly, and when least expected, supervenes.

I recollect to have seen a similar case, under the care of a

distinguished physician, in hospital practice; the patient was so far convalescent that she was able to walk about the ward; she had been able to sit up, during the whole of her sickness, a short time each day. She suddenly became worse, with symptoms like those above described, without pain or swelling of abdomen, and died in a few hours. A small perforation of the bowel was found at the autopsy.

I would here state that during the past six months, ending Nov. 1st, 112 patients have been under the care of the surgeons of the Chicago Charitable Eye and Ear Infirmary, making an aggregate of 227 patients who have been under treatment since its organization.

Diseases of nearly every description and stage of progress among the poorest classes which our city can produce have been treated."

An interesting discussion of the views contained in the sanitary reports was participated in by the members of the Society generally.

The question, "What were the characteristics of the fevers prevalent in this city during the past autumn?" being next in order, Dr. Davis remarked in substance as follows:

The question for discussion had reference to the "characteristic features" of such cases of fever as had been noticed in this city during the past summer and autumn.

From the latter part of July to the middle of October, cases of periodical fever, both of the intermittent and remittent forms, were of frequent occurrence, though at no time unusually prevalent. In those cases he had observed nothing peculiar, either in the symptoms or the treatment required. One case only had presented a pernicious or malignant aspect. This occurred in a native of Ireland, living on Mather St., near the south branch of the river. When visited, the extremities were cold: the lips livid; the eyes sunken; the breathing hurried and irregular; the pulse small, feeble and frequent; pain in the bowels, with frequent serous discharges tinged with blood; and extreme restlessness. All these symptoms had supervened suddenly, immediately preceded by chilliness and pains in the back and limbs, such as usually attend the com-

mencement of a paroxysm of intermittent fever. From these symptoms he inferred that the patient was in the midst of a paroxysm of pernicious fever, with irritation of the mucous membranes; and prescribed large sinapisms of mustard over the epigastrium and spine; an enema of tinct. of opium ʒj, in half a tea cup full of cold water, to be used immediately after each evacuation from the bowels; and a solution of sulph. morph., 2 grs., bi carb. soda ʒj, in water ʒjv, of which a tea spoonful was to be given immediately after each effort at vomiting. He also directed the following powders, viz:

℞ Sulph. Quin. 20 grs.
Pulv. Opii, 10 grs.
Proto-Chloride Hydarg. 10 grs.

Mix, and divide into six powders, the first to be taken in one hour after the visit, and the remaining ones at intervals of two hours until all had been taken. The next day the patient was found free from fever and other severe symptoms. By keeping up a moderate antiperiodic influence of quinine, and due attention to the bowels for two or three days, the patient rapidly recovered.

In regard to continued fevers, he stated that cases had occurred, as usual, throughout the season; but that they became more frequent during the month of September.

The only peculiarities observed, worthy of mention, were that a larger proportion of the cases than usual presented the phenomena of typhus, as distinguished from typhoid or enteric fever; and that many of them were ushered in with a distinct chill, fol'owed by daily exacerbations for three or four days. The last named peculiarity was so prominent in several cases as to cause attending physicians to mistake them for true malarious remittents, and to treat them with quinine in antiperiodic doses. He said such cases led to two inquiries of much practical importance. 1st, Are they really cases in which the two types of fever, periodical and continued, are blended together, or are they simple cases of typhus in which the febrile symptoms undergo greater diurnal changes than usual?

2d. If they are cases of simple or unmixed typhus, what are the symptoms by which we can distinguish them from cases of the true remittent type?

The question whether the different types of fever are capable of being blended together in the same individual has been ably discussed in two reports to the American Medical Association, the first by Dr. S. H. Dickson, of Charleston, S. C., one of the most eminent teachers of practical medicine in the profession; and the other by Dr. Pease, of Janesville, Wis.

Without attempting to review the facts and arguments relating to the question, he simply expressed his own opinion that the elementary morbid conditions were, in some respects, so different in the two forms of fever, as to preclude the idea that we could have the *active* symptoms of both mingled together in the same patient. Hence he regarded the cases of continued fever that had presented distinct exacerbations and remissions during the first three or four days of their progress, as only deviations from the ordinary course of symptoms, and not dependent on the admixture of any true malarious influence. If this is true, it is of great practical importance to make the proper diagnosis between such cases and true remittent fever. To do this, he said, it was evident that we must rely on other symptoms besides the exacerbations and apparent remissions; for these had been so strongly marked in the beginning of many of the cases, occurring since the middle of August, that they had been actually mistaken for genuine remittent cases by some of our best practitioners, and treated with full doses of quinine, until the subsequent progress of the cases compelled a correction of the error. He believed, however, that a careful attention to the expression of countenance, the color of the lips; the state of the tongue; the feelings in the head; and the mental condition of the patient, would enable the practitioner to avoid the mistake alluded to. He stated that in all the cases of continued fever which had come under his observation, whether characterized by daily exacerbations during the first few days or not, there was a dulness and heaviness in the expression of countenance; red and dry appearance of the prolabia: a feeling of giddiness or swimming in the head on attempting to assume the erect position after lying down; and an apparent reluctance on the part of the patient to converse cheerfully, or even to admit that he was much sick, which he

had never seen in the early stages of periodical fever. Some have claimed to be aided in making the diagnosis by the action of remedies. Thus, if the case presented the semblance of periodicity in the febrile movements, quinine in anti-periodic doses was promptly administered. If it fully arrested the progress of the fever, the case was regarded as a true malarious fever. If, however, the anti-periodic, was followed by simple diminution of the exacerbations without interrupting the fever, it was then regarded as typhoid or typhus, and treated accordingly. This practice is founded on the assumption that the quinine is harmless in the early stage of continued fever, even when it exerts no apparent influence over the continuance of the disease. But he doubted the truthfulness of this assumption. Several years since his attention was arrested by the apparently injurious effect of five grain doses of quinine in the early stage of a case of continued fever; its administration having been followed by a stupor from which the patient never recovered. And the only fatal cases that had come under his observation, in private practice, during the past season, were in patients to whom from three to five grain doses of quinine had been administered during the first two days after the treatment was commenced, under the impression that they were cases of "bilious remittent fever." These cases, three in number, were so well calculated to illustrate the peculiarities of fevers of the past three months, that they were related in detail. We have space only for their more prominent features. The first was a man aged about 30 years, who was attacked with all the ordinary symptoms of an idiopathic fever, ushered in by chilliness, and continued with distinct exacerbations and remissions. A respectable physician was called in, who prescribed alteratives and anti-periodic doses of quinine, which seemed to arrest the exacerbations, and for two days the patient thought he was rapidly recovering. At the end of that time, however, he found himself unable to keep up, on account of a peculiar degree of swimming in the head, a constant fever, a dirty white coat upon the tongue inclining to be dry in the middle; a dull expression of countenance, and slight wandering of mind during the night. The latter symptom soon be-

came more marked, so that the low muttering delirium was constant until the fatal result, which was in ten days after he was seen by the speaker. The symptoms during that time were those of a well marked typhus; there being neither diarrhœa nor tympanitic abdomen, and yet the case terminated suddenly from copious intestinal hemorrhage. The other two cases were so similar in all their features, except the mode of death, and the apparent effects of the quinine so nearly the same, that it is unnecessary to repeat the description. In each the immediate effect was to arrest the exacerbations to such a degree, that the attending physicians entertained no doubt of the propriety of its use. Yet in each, the mind first became very dull and taciturn, then entirely wandering, with well marked symptoms of a low grade of typhus Such results had led him to doubt, not only the beneficial effects of quinine in the early stage of continued fevers, but its harmlessness also.

On motion, the Society adjourned.

BOOK AND PAMPHLET NOTICES.

INTRODUCTORY ADDRESS ON ANATOMY. By TITUS DEVILLE, M. D, Prof. of Anatomy in Lind University, Chicago.

This address will commend itself for its originality, and the vigor and terseness of style in which the thoughts are expressed. The author has shown himself not only in possession of great mental vigor, but of habits of close thought and observation. Prof. Deville is not one of those who believes that knowledge comes by intuition, but like some others, his department has been and still is the grand ruling and controlling motive in life. To a thorough knowledge of his subject he unites a happy tact in imparting and impressing what he wishes to teach upon the mind of his student. Chaste and animated in his style, he fixes the attention of his class, and gives full assurance of his real worth as a lecturer. It is not the information that is conveyed, nor the polished and agreeable form in which the matter is presented, that renders addresses of this nature so eminently attractive; but the powerful stimulus such appeals inevitably give to the pursuit of knowledge in the minds of

those to whom they are specially addressed. The following extracts from the *brochure* itself, will more fully acquaint the reader with its scope and character.

"On the faithfulness and excellence of anatomical details, blended with a highly cultivated taste, does the celebrity of the works of the sculptor and life-painter depend, and none have earned for themselves an undying reputation who have disregarded the study of anatomy as essential to that perfection which confers the stamp of genius on their productions. Whether we inspect the marvellous skill displayed in the Venus de Medici, Diana, Apollo Belvidere, Laocoon, Elgin Marbles, and other relics of classic art, or look to the period of the revival of art, at the works of a Michael Angelo, and a Leonardo da Vinci, down to the Etty of our own times, all evince that careful and correct appreciation of form and outline which can only be acquired by the teachings of *anatomy*. But of all the sciences which anatomy enriches, and to which she contributes her aid, none have received such a solid and brilliant impetus as Geology. The scroll of time has been read in the rocks and caverns of the earth, the matters that form the earth's exterior covering, have been found not to be a rude and confused mass, but a systematic arrangement, having a relative position and structure, and containing fossil remains of animal and vegetable life, differing in form and species, and belonging to another order of things than that which now surrounds us. These remains, detected by the sagacity of a Cuvier, and completed by Agassiz, Grant, Forbes, Owen, and others, have become the interpreters of the world's primeval history, and disclosed the fact that animal and vegetable forms, unlike anything now to be found on the earth, have lived in ages long, long ago, anterior not only to human records, but to the existence of man himself. They have disappeared by ordained convulsions of nature; whose history these hitherto silent oracles have at length disclosed, and have been succeeded by others of a different organization, and living under different physical conditions, which in turn have given place to the existing world of life, of which man, earth's thoughtful lord, is the crowning work. * * * *

The characteristics which distinguish the workmanship of nature in the construction of the skeleton, and excite a discriminative and judicious admiration, are found in the rigid economy conspicuous in every part, the diversified application of each single contrivance, the effective employment of apparently insignificant advantages—the accurate adjustment of the capabilities of each organ to the special function which it is designed to perform, and the particular strain which it has to support—the *elasticity* of one, the *rigidity* of another, the *tenuity* of a third, the *density* of a fourth; and the wonderful combination of lightness and durability which results to the fabric, considered as a whole.

What a remarkable piece of mechanism is the vertebral column!

Strong enough to support several hundred weight, yet pliant and elastic; furnished with levers and muscles, by which it is bent in every direction, yet lodging an organ susceptible of injury from the slightest pressure; formed, for lightness, of a loose and reticular tissue, yet capable of sustaining without fracture, shocks, strains, and contortions of considerable violence: this column certainly combines the most opposite qualities, and performs functions apparently incompatible. * * * * *

The functions of the hand, though for the most part matters of common experience, assume a new interest when considered in connection with its anatomical structure. The number and variety of its functions contrasted with the simplicity of the mechanism by which they are performed, illustrate the characteristic tendency of nature to produce, by the simplest possible means, the most numerous and diversified possible results. Guided by this general truth, let us review some of the ordinary actions of the hand. Compare, for instance, the light and gently varied compression with which it confines a fluttering bird, to the firm and unrelaxing hold with which it grasps a warlike weapon, or wields some heavy tool. Consider the swiftness of its movements in following the speaker with the pen; their variety in loosening a tangled knot; their nicety and precision in passing a thread through the eye of a needle. How steadily it guides the edge of the scalpel in a critical operation of surgery; with what singular truth it shapes the course of the school boy's marble, or adjusts his arrow to its mark! Nor are these the most wonderful of its performances. Trained to the juggler's sleight, its joints become yet nimbler and more pliant. Its evolutions, in the practice of several mechanical arts, are swifter than the eye can follow, of unerring regularity, independent of the guidance of vision, and productive of the most surprising results. In the musician, the sculptor, and the painter, it becomes the minister of more subtle volitions, and a higher instinct; in them accordingly, it requires still greater freedom and fluence of motion, a yet more exquisite refinement and fidelity of touch. In the orator it assumes a new character, and functions of an entirely different order. For him it is a powerful organ of expression, an indispensable auxiliary to speech. Accompanying with significant gestures the thoughts and emotions of the mind, it becomes the visible exponent of its secret workings; *the tongue*, so to speak, *of a language common* to all mankind. Bring together the wandering Arab—the red warrior of the American forests—the feathered barbarian of Africa—the civilized European. Which of them will mistake the meaning of a hand clenched in anger, or shaken in defiance; stretched abroad in the attitude of command, or raised to heaven in solemn attestation; waved triumphantly above the head, or pointing the finger of scorn; beckoning to summon attendance; barring the lips to enjoin silence; calmly extended in benediction; flung widely forth in dispair; covering the face in shame; wrung in the bitterness of grief; spread and

shuddering in horror; or folded tranquilly in prayer? This delicate organ, capable as we have seen, of moving with the speed and precision of clockwork, may be doubled to form a weapon of offence, and employed, in the manner of a bludgeon, to give heavy blows, or to repel the strokes of an assailant. These violent concussions it sustains uninjured; eluding its force by their elasticity; and returning with unimpaired activity to the operations of the lathe or the loom.

When we consider the universality of the adaptation of means to ends—so constant that it cannot be the effect of chance—and the consummate harmony of the whole result so immeasurably transcending the highest efforts of human genius, it seems scarcely possible to arrive at any other rational conclusion, than that the universe, with all it contains, is the work of one Almighty and Benevolent Mind. The philosopher who has attained the highest summit of mortal wisdom, is he, who if he use his faculties aright, has the clearest preception of the limits of human knowledge, and the most earnest desire for the lifting of that veil which separates him from the Unseen. He then has the strongest motives for that humility of spirit and purity of heart, without which, we are assured, none shall meet their heavenly reward.

There is in medical science still, that dark centre which none of us have been permitted to penetrate; but it is surrounded by numerous investigators which give it now a hopeful light. From that brilliant circle, let it be your ambition each to snatch a burning brand, and penetrating the darkest recesses of the shade, there deposit your contribution of love. And, let us hope, that in no distant day there may arise some mighty genius who will gather up those scintillations, and combining them into one vast torch of truth, elevate it far above the obstructions of ignorance and folly, where it may burn with an unbroken lustre, and penetrate the remotest corner of the gloom!"

BOTANY AS AN ALLY OF MEDICINE. A Lecture delivered to the Medical Society of the University of Nashville, Dec. 2d, 1859. By GEORGE S. BLACKIE, M. D., A. M., T. B. S. E., etc. p. p. 24. Nashville.

After the perusal of this interesting lecture, the reader is surprised that Botany should be regarded with so much indifference by the great mass of mankind; and it is no less surprising than true, that even intelligent physicians should be so generally ignorant of the source of four-fifths of their most valued remedial agents. But it is not so much the value of botany in determining the use of plants, as articles of the materia medica, or of diet, that is referred to by the lecturer; but it is valuable as a means of mental discipline, and important in preparing the student for the reception of more practi-

cal instruction. But among the many ways in which Botany is an "Ally of Medicine," the following is the most striking:

"The perfection of the microscope, and other means of physical diagnosis, have brought to our knowledge the fact that many diseases to which our system is liable are caused by the presence of minute vegetable organisms preying upon it. The labors of Robin Goodsir, Leidy, Ehrenberg, Berkely and others have demonstrated incontestibly this fact, which any of you can confirm for yourselves. M. Robin in his treatise on vegetable parasites, enumerates and describes no fewer than eighty-six species, *Agæ* and *Fungi*, growing upon man and the lower animals. Of course they act as foreign bodies, and give rise to diseases of various kinds. Thus in the aphthous disease of new born children termed *muguet* by the French, the tongue and cavity of the mouth are found covered with a yellow flocculent matter, in which sporules and confervoid filaments (*Oidium albicans*), in an advanced state of development, may be detected in considerable numbers. Again, vegetable fungi, such as various kinds of *torulœ*, more especially one resembling a wool-sack, first described by Mr. Goodsir, and named by him the *Sarcena ventriculi*, are found in vomited matters in certain diseases, and many even themselves give rise to disease, as certain recent cases of intestinal parasites seem to demonstrate. Then again the crust of *favus* is formed of a capsule of epidermic cells lined by a mass of fine granules from which millions of cryptogamic plants, (Achorion Schoenleini) spring up and fructify producing their spores and increasing the disease, their parasitic presence being the pathognomonic character of scald-head or ring-worm, and their sporules and offshoots entering between the fibres of the hair choke it up and cause atrophy of the bulb, of which baldness is the result. Other instances might be cited, but these will suffice. Now the fact that these diseases are of vegetable origin, and caused by spores requiring all the necessaries to vegetable existence for their development and increase, is of enormous importance in the treatment. It leads us to inquire what will contribute to the life or death of a similar vegetable spore, and to employ in our outward application the substances which will cause its death. Thus the philosophic treatment, founded on botanical knowledge, of scald-head, will be to apply emollient washes to the scalp, gradually to remove the incrustations, to remove with as little violence as possible the dead and wounded hairs in which the spores are lodged, and to apply poultices or ointments which will cover the scalp, and filling up the interstices, prevent air and moisture from causing an increase of the plant. The philosophic treatment of ring-worm will be to apply castor-oil or some such substance to part effected, and similar treatment will be found for all similar affections."

THE FIFTH ANNUAL REPORT TO THE LEGISLATURE OF SOUTH CAROLINA: relating to the Registry and Returns of Births, Marriages and Deaths in the State, for the year ending Dec. 31st, 1858. By ROBERT W. GIBBS, M. D., Columbia, S. C. 1859.

We have received this most interesting and valuable Report. There is evidence of much labor in its preparation, and we could only wish that the political *film* might be removed from the eyes of the legislature of our own Prairie State, long enough for them to see the advantageous results that would accrue from following in the footsteps of South Carolina in this particular.

ANCIENT MARRIAGES OF CONSANGUINITY. By ISAAC CASSELBURY, M. D., of Evansville, Ind.

This reprint from the pages of the *Nashville Journal of Med. and Surgery* is upon our table, and we are under obligations to the author for such a curious and interesting collection of historical facts.

SOME REMARKS ON THE METHODS OF STUDYING AND TEACHING PHYSIOLOGY. By J. ATKIN MEIGS, M. D., Prof. of the Institute of Medicine, in the Department of Pennsylvania College, and Lecturer on Physiology at the Franklin Institute.

This Critical Review has already appeared in the columns of the *North American Medico Chirurgical Review*, and its second perusal cannot but be interesting and profitable to the members of the profession. We are glad to see that the author considers Dr. Dalton's new work on this subject as a lucid and concise exposition of the leading or fundamental principles of the science of life in health, as not only superior to the Text Books generally used in our Institutions, but in many particulars is perhaps unequalled.

THE SUBJECTIVE AND OBJECTIVE INFLUENCE OF MEDICINE. An Introductory Address at the opening of the regular course of Shelby Medical College, Nashville, Tenn., for the Session 1859-60. By E. B. HASKINS, M. D., Professor of the Principles and Practice of Medicine.

INTRODUCTORY LECTURES AND ADDRESSES ON MEDICAL SUBJECTS. Deliver-chiefly before the Medical Classes of the University of Pennsylvania. By GEORGE B. WOOD, M. D., L. L. D. Professor of the Theory and Practice of Medicine, and of Clinical Medicine, in the University of Pennsylvania, etc. pp. 460. Philadelphia: J. B. Lippincott & Co., Publishers. 1859.

We are under obligations to the author for the above new publication, received just as we go to press, and we shall take pleasure in recurring to its interesting contents more particularly at our earliest convenience.

CLINICAL REPORTS.

Medical Wards of the Mercy Hospital. Service of Prof. N. S. Davis.

Nov. 8th, 1859. Male Ward No. 2. On entering the ward, Dr. Davis remarked to the class, that he should restrict their attention during the present clinic hour to two cases which were worthy of a very careful examination.

The first is a man, native of Ireland, aged about 45 years, who came a few days since from the southern part of Wisconsin, with the hope of obtaining relief from an abdominal dropsy. He observed that the patient was considerably emaciated; the lips thin, though not pale; the conjunctiva of the eye slightly yellow; the skin dry, but of natural temperature; the tongue natural; the bowels inactive or constipated; digestion impaired, producing much gaseous eructations after meals; sense of fullness and oppression in the epigastric and hypochondriac regions; frequent sharp pains, with some tenderness in the region of the right ureter; urine scanty and high colored; pulse 85 per minute, and moderately full; and the whole abdomen much distended with a fluid, as shown by percussion and succussion. After giving the class an opportunity to examine the abdomen individually, he remarked that in former times *dropsy* was regarded as a disease *per se*. And hence, nearly all the older writers will be found to treat of two varieties, viz: Active and passive, or sthenic and asthenic dropsies. But modern researches have clearly shown all the forms of dropsy to be the result or consequence of some preceding pathological condition, often located in some part remote from the seat of the dropsical effusion. Hence the accumulation of water or serum in the abdomen of this patient, as in all others, is to be regarded as a mere symptom, as much so as a cough, a hot skin, or a pain in the head. Whenever, therefore, a patient is presented to you with dropsical accumulations, whether in the form of anasarca, ascites, or hydrathorax; the first question which should occupy your minds is, what is the cause, or special pathological condition, which has given rise to this effusion? For on a proper solution of this will depend all rational treatment. Your ability to arrive at clear and accurate conclusions in rela-

tion to any particular case, will be greatly enhanced by keeping in mind the following general considerations, viz: First, all dropsies arise immediately from, either such an alteration in the relative proportion of the proximate elements of the whole mass of the blood as to leave the *watery* element in excess, or from direct mechanical obstruction of the blood vessels connected with the seat of the dropsy.

Second, in all cases in which the dropsy arises from an alteration of the whole mass of the blood, it first shows itself in the areolar tissues, and most prominently in the parts that are most dependent or most remote from the heart; and hence is termed œdema or anasarca. But by continuance it may, not only invade all the areolar tissues, but also one or all the serous sacs of the body, as the pleura, peritoneum, pericardium, etc., and is hence often called *general* dropsy. On the other hand, in all those cases where mechanical obstruction to the circulation is the immediate cause, the dropsical accumulation is limited to the part with which the obstructed vessels are connected; and hence it is called circumscribed or *local* dropsy.

The pathological conditions capable of giving rise to what he had defined as general dropsy, are numerous. Those of most practical importance are; First, albuminuria, or such an alteration of the function of the kidneys, as causes a portion of the albumen of the blood to escape with the urine, and thereby leaves the watery element in excess; second, protracted organic disease of the heart; third, protracted interruption of the menses, or long continued action of malaria; either of which are capable of rendering the individual so anemic, or, in other words, of producing such a diminution of the red corpuscles of the blood, as to leave the water greatly in excess.

The pathological conditions capable of giving rise to local dropsy, are two, viz: Such a mechanical pressure on the trunks of the blood vessels as to cause their capillary extremities to become habitually over distended, until the watery part permeates the coats of the vessels, and infiltrates the interstitial spaces, or is effused upon a membranous surface; and direct inflammation of the texture or membrane from which the effusion takes place.

As both these conditions are restricted in their action to particular vessels or tissues, so the resulting dropsical effusion must be limited to corresponding parts, and therefore necessarily local. Applying these general observations to the case before us, the question immediately arises, is it one of general or local dropsy? On examination we find it belonging to the latter class, for the accumulation of fluid is limited exclusively to the peritoneal sac. This determined, we advance directly to another question, namely, whether the accumulation is the result of pressure upon some of the vessels connected with the abdominal cavity, or of inflammation of the peritoneal membrane itself?

Peritonitis, acute or chronic, would be accompanied by more or less febrile movement; a sharp and quick pulse; tenseness of the abdominal walls, with decided tenderness; and a rapid wasting of flesh and strength. The patient before us has none of these symptoms, except the emaciation which has been produced very slowly, and is only of moderate amount, and a very limited degree of tenderness in the right iliac region. From the absence of all the more important symptoms of peritoneal inflammation, we must look for some one of those causes which mechanically obstruct the abdominal circulation, such as alterations in the size and texture of the liver, spleen, and mesenteric glands. To detect the existence of these, we must rely principally upon palpation or touch aided by percussion. Placing the patient in a recumbent position, with the abdominal muscles relaxed, the lecturer proceeded to make a careful physical exploration of the abdomen. No solid body could be felt in the abdominal cavity, and the accumulation of water rendered it everywhere dull on percussion, except directly over the course of the transverse colon and stomach, where the tympanitic or intestinal resonance was well marked. He pointed out the latter fact as one of much diagnostic value in such cases. The natural position of the transverse colon, being immediately beneath the lower edge of the liver and spleen; it must necessarily be carried downward whenever either or both of these organs become enlarged by disease; thereby extending the hepatic or splenitic dullness below the lower margin of the ribs.

But in this patient, the resonance of the colon not only exists up to the convex edge of the ribs, but extends, on the right side, more than an inch above the lower margin of the hypochondriac region. This clearly shows that the liver is not enlarged. Neither do the physical signs afford evidence of enlargement of any of the abdominal viscera. But there is another disease of the liver besides enlargement, that so far obstructs the portal circulation, as to make ascites one of its most constant accompaniments. He alluded to cirrhosis or hob-nail liver; a disease which induces such a degree of contraction and atrophy of that organ, as to obstruct the flow of blood through the hepatic capillaries of the vena portæ, thereby causing the trunk of that vessel and its intestinal capillaries to be over-distended, until the serous or watery portion of the contained blood becomes effused into the sac of the peritoneum.

Extending the examination by percussion over the whole of the right side of the chest, it was found that the hepatic dullness covered a much less space than natural, being less than two inches in vertical diameter. There was also some tenderness over the region of the liver as shown by the complaint of the patient during the act of percussion. If we take these facts in connection with the slow development of the disease; the frequent evidence of hepatic derangement during its early progress; the constantly disordered digestion; the torpid state of the bowels; the scanty and high colored condition of the urine; *followed* by the gradually increasing dropsical effusion into the cavity of the abdomen, there can be scarcely a doubt but the case is one of genuine cirrhosis; advanced to that stage which is characterized by decided atrophy and contraction of the liver, with functional disorder of the whole digestive aparatus, and serous effusion.

The origin and nature of the disease termed Cirrhosis, is involved in obscurity. It has been supposed to originate in a low grade of inflammation in the fibrous tissue that enters the liver surrounding the hepatic vessels, and extending with them around each separate *lobule*; and that the subsequent atrophy and contraction is the result of obstruction to the nutrient arteries and contraction of the fibrous texture. This view is coun-

tenanced by the fact that in most, if not all of the cases, there is in the early stage more or less pain and tenderness in the hepatic region, with some fever. Such was the case with this patient in the early stage, and you have seen that the tenderness still continues in the case before us. The disease occurs much the most frequently in those who are addicted to the use of alcoholic beverages.

When the disease has continued, as in the case before us, until the size of the organ is much diminished, and the portal circulation sufficiently obstructed to cause ascites, the prognosis is very unfavorable. The dropsical accumulation may be retarded by diuretics, or it may be temporarily removed by paracentisis abdominis, but the loss of flesh and strength continues to increase gradually, until at length a fatal degree of exhaustion supervenes. The Doctor remarked that he should prescribe for the present patient a powder of hydrarg. cum. creta 2 grs., and pulv. doveri 3 grs., to be given before each meal; and an infusion of juniper berries, uva ursi, and digitalis leaves, in doses of half a wine-glassful every four hours. After the alterative powder had been taken for two days, it should be followed by a laxative sufficient to move the bowels. If the diuretics fail to lessen the amount of effusion, and the abdomen becomes so much distended as to interfere with respiration, tapping must be resorted to for temporary relief. He alluded to some cases in which a large amount of fluid had been evacuated four or five times through the canula of the trocar, before the period of fatal exhaustion was reached.

Case 2d. *Chronic Conjunctivitis.* The second case to which the attention of the class was directed, was one of chronic inflammation of the conjunctiva in both eyes, with much thickening of the membrane, and a rough granular condition of its surface; and considerable opacity of the delicate layer reflected over the surface of the cornea.

This case was the sequel of an acute attack of conjunctivitis taking place more than six months previous. The conjunctiva lining the upper lids was very thick, hard and rough, and by its contact with the cornea contributed much to produce and perpetuate the superficial opacity which now almost destroys

the vision. There is still a morbid sensitiveness of the eyes, as indicated by the free flow of tears when they are opened for examination.

Treatment.—The upper lids were everted and a smooth stick of nitrate of silver applied, so as to thoroughly cauterize the granular surface. The coagula were washed away with a camel hair pencil, and the lids allowed to close. It was remarked that this application should be repeated about every third day, until the granulations were removed. In the interval between these applications, a solution of sulph. morphine 5 grs. to the ounce of water, may be dropped into the eyes three or four times a day to lessen their irritability. This patient had been much debilitated by the protracted use of cathartics and low diet, and he was ordered a teaspoonful of the tincture of cinchonæ three times a day, each holding in solution the sixteenth of a grain of bi-chloride of mercury.

CLINIQUE OF PROF. DAVIS, in the Medical Department of Lind University. Saturday Afternoon.

Case 1st. *Acute General Dropsy.* The remarks on this case were substantially as follows:—The patient, a native of Ireland, aged about 38 years, was engaged some three weeks since in labor on the prairie, where he got thoroughly wet by a shower of rain, and slept on the damp ground in a temporary shanty.

This was followed by a fever, accompanied by severe pain in the head and back, with decided scantiness of urine. No regular medical aid was obtained, but the patient says his fever subsided in five or six days, but the pain in the loins continued and his feet and ankles began to swell. This swelling rapidly increased, until at present he his universally œdematous; the lower extremities being very much swollen, and pitting deeply on pressure; also a moderate amount of effusion into the abdominal cavity. His pulse is still more full and frequent than natural; his tongue coated; his urine diminished in quantity, and pale in color; with a moderate degree of pain in his back. Those members of the class who have attended the Mercy Hospital and listened to the comments on a case of ascites, a

few days since, will readily recognize this as a case of general dropsy; and consequently arising from some cause capable of altering the relative proportion of the constituents of the blood. One of the most common and important of these causes, is such a pathological condition of the kidneys as allows the albumen of the blood to escape with the urine. As the viscidity of the blood depends much on the albumen, whenever the latter is diminished in quantity by excretion through the kidneys, the whole mass of the blood becomes thinner, and dropsical effusions very generally occur.

Finding by auscultation no evidence of organic disease of the heart, and nothing in the history of the case to indicate chronic ague or other causes of anemia, attention must be turned to the kidneys as a probable seat of disease. The exposure to cold and wet that immediately preceded the attack of sickness in this patient, the pain in the loins, the fever, and the scantiness of urine, which characterized the early part of the sickness, soon followed by œdematous effusions into the cellular tissue, point strongly to the kidneys as the seat of such a degree of inflammatory engorgement as to cause the excretion of albumen. This can only be determined certainly, however, by applying the proper chemical tests to the urine. The patient having brought a specimen of his urine in a vial, it was subjected to the tests of heat and nitric acid, before the class. Both the tests caused an abundant precipitate of albumen. The lecturer observed that we had now demonstrative proof that the action of the kidneys was perverted, and that the amount of albuminous excretion was sufficient to impoverish the blood and explain the appearance of the dropsy. But this did not complete the diagnosis. The question now remains, whether the perverted action of the kidneys, is dependent on a simple hyperæmic or inflammatory condition of their secreting structure, or on that peculiar organic change which is properly denominated albuminuria, Bright's disease, or granular kidney? Practically this is a question of much importance.

On its proper solution depends both the correctness of the prognosis and the success of the treatment; the true granular kidney being to a great extent incurable, while those cases of

acute dropsy with albuminous urine, dependent on mere inflammatory congestion of the kidneys, can generally be speedily relieved, especially if brought under treatment in the early stage of its progress. In making the diagnosis on this point, we must rely much on the manner of the attack. If the health of the patient has declined slowly, feeling depressed in mind with various dyspeptic symptoms, and more or less pains in the loins, with a sense of weakness for several months before any signs of œdema appear; if the latter increases very slowly with a corresponding increase of the preceding symptoms, the urine itself being small in quantity and pale in color, it is quite certain that the disease is a granular degeneration or organic disease of the kidneys. On the other hand, if the attack of sickness has come on suddenly with fever, after a sudden exposure to wet or cold, or during the convalescense from some idiopathic or eruptive fever, and the dropsical effusions have been developed with almost equal rapidity, it is more than probable that the disease is simply inflammatory in its nature. The class will readily recognize the patient before them as belonging to the latter class. His previous good health, the severe exposure to wet and cold, the fever and pain in the back that immediately followed, ending in a few days in general œdema of the cellular tissue, are sufficient to show that the present condition of the patient could not depend on a slow change of structure like the true granular degeneration, or Bright's disease. Being fully satisfied that the disease was inflammatory, the lecturer directed six powders, each containing calomel 2 grs., pulv. degitalis leaves 2 grs., and pulv. doveri 5 grs., to be given every four hours; and when all are taken follow them by sufficient rheubarb and cream of tartar to move the bowels briskly. After this he advised one of the same powders to be given each morning, noon and night, until five or six more had been taken; then omit the calomel and substitute in its place 8 grs. of nitrate of potassa.

He also directed that after the operation of the first dose of physic, the patient should use a solution of bi-tartrate of potassa as a drink. This course of treatment was carried out during the succeeding week, and on Saturday the patient returned to the clinique very much improved.

The bowels had been kept soluble, the urine had increased in quantity, and the amount of dropsical effusion had been much reduced. A specimen of the urine was exhibited to the class, and subjected to the action of heat and nitric acid, and although there was still a trace of albumen, its quantity was very much diminished. He was directed an infusion of uva ursi, nigitalis, and nitrate of potassa, to be taken four times a day.

On his return to the clinique the following week, he appeared quite well; his urine was abundant and presented no trace of albumen.

EDITORIAL.

We are very much obliged to our editorial brethren for the kind notices they have made of our first issue.

Many of them have represented the *Examiner* as the organ of the Medical Department of Lind University, with which the senior editor is connected. Though we do not complain of this, it is nevertheless untrue. The faculty of that Institution neither contribute a dollar to the support of this Journal, except as individual subscribers, nor control a single one of its pages. So far as the plan of instruction in that Institution accords with what we think the interests of the profession require, we shall commend it, but no farther. And we shall do the same thing by any other Medical College of which we may have occasion to speak, whether located in this city or elsewhere.

The *Chicago Medical Examiner* is the property of its editors, and as independent of all schools, clubs, or cliques, as any other medical periodical in the United States.

MEDICAL INSTRUCTION IN CHICAGO.

The two Medical Colleges in this city are pursuing the even tenor of their way, each carrying out its own system of instruction successfully. The course in the Rush Medical College, which is still restricted to sixteen weeks, is rapidly drawing to

a close; while that in the Medical Department of the Lind University continues until the first Monday in March. The number of Students in the latter Institution is 32. Its two departments, junior and senior, are carried on simultaneously with perfect regularity, and to the entire satisfaction of both divisions of the class.

We have recently received an announcement of the "Chicago Summer School of Medicine," by which we learn that Drs. G. K. Amerman, E. L. Holmes, J. P. Ross, E. Powell, H. W. Jones, W. C. Hunt, G. A. Mariner, and E. O. F Roler, have associated themselves together for the purpose of giving medical instruction to such students as may be induced to listen to them after the annual courses in the Colleges have closed. They promise one clinique, one lecture, and one recitation or examination each day, commencing on the first Monday in March, and continuing *sixteen* weeks. Terms $20, for the course, or $3.00 for single tickets.

All the members of this Association are young men of respectable attainments, and will do their best, both to instruct and please any who may place themselves under their charge.

We are authorized also to state that the Medical Faculty of Lind University will receive Students for the entire summer, and afford them every facility for pursuing the various branches of medical study, including hospital and dispensary cliniques, microscopy, and experimental physiology.

EXPERIMENTAL PHYSIOLOGY.

We see it stated in a recent number of the *Med. and Surg. Reporter* of Philadelphia, that a claim had been set up to the effect that Professors A. Flint and J. C. Dalton, were the only teachers in the United States who illustrate their instruction in physiology by vivisections. The *Reporter* corrects this by adding the names of two other gentlemen in that city. And we further correct it by adding the names of Professors Deville and Hollister, of the Lind University, who have made some beautiful demonstrations by vivisections before the class during the present lecture term.

PROF. DEVILLE'S LECTURE.

Some of our readers may think that we occupy too much space in the original department of the *Examiner* with a single article. We think, however, that in a Journal of 64 pages, it were better if we could have in every number *one* well written essay, in which some important subject is thoroughly investigated, than to fill the whole space with short and incomplete articles. It would contribute much more to the advancement of the science and literature of the profession, and yet leave room for an ample variety of matter. We are sure that the merits of Prof. Deville's lecture in the present number will fully repay a careful perusal by every reader.

RUSH MEDICAL COLLEGE CLINIQUE.

IMPORTANT NOTICE.

A regular clinique is given in the amphitheatre of the Rush Medical College every Saturday afternoon, by the Professor of Surgery, Dr. Daniel Brainard. Such cliniques are given in almost all the Medical Colleges throughout the country, and they are everywhere free for the attendance of regular practitioners, and especially for the *alumni* of the respective schools. Acting in accordance with this general custom, one of the Editors of this Journal, in company with another young practitioner of this City, (both being recent graduates of that College, and in good standing in the profession) went to the Rush Medical College, at the clinique hour for the 17th of December, and quietly seated themselves with the class in the lecture room. The Professor of Surgery soon entered with a patient, and began his clinique. He had proceeded but a few words when he discovered the two young practitioners alluded to, in the audience. He suddenly stopped, left the room, and in a few minutes sent them the following notice in his own handwriting, viz:

"Dr. STEELE,

No person is allowed in this Clinique except members of the class and invited persons.

D. BRAINARD."

Of course the two gentlemen retired. But as this authoritative announcement from the President of that College, establishes a new order of things there; and especially a new relation between it and its numerous alumni, we have thought it proper to give the profession due notice of the fact; that any who might hereafter wish to spend an hour in the learned Professor's Clinique, should be careful to contrive some way to obtain a special "invitation" first. Of the propriety and *peculiar liberality* of this novel arrangement, we shall leave the profession to judge.

CHICAGO COLLEGE OF PHARMACY.

We are glad to know that the efforts of a few of our leading and most enterprising Druggists, have resulted in establishing the above Institute upon a sure basis; and that during the progress of the first annual course of instruction they have shown themselves satisfied with the spirit that has called the enterprise into existence, by extending the hand of patronage. For we have never doubted that an effort to more fully develope the vast resources of our city, as well as elevate the standard of general professional requirements, would meet with a just and generous reward.

The members of the faculty are: James V. Z. Blaney, M. D., *Professor of Chemistry*; F. Scammon, M. D., *Professor of Pharmacy;* and John H. Rauch, M. D., *Professor of Materia Medica.*

ILLINOIS STATE MEDICAL SOCIETY.

The next Annual Meeting of the State Society will be held at Paris, Edgar Co., the second Tuesday in May next. We call attention to this matter thus early, to remind the members of the profession of the duty they severally owe the Chairmen of the respective Committees. It is to be hoped that the following will be made a subject of special consideration:—

TO THE MEDICAL PROFESSION.

At the Annual Meeting of the *Illinois State Medical Society*, held at Decatur on the first Tuesday in June last, the undersigned was appointed a Special Committee on the Medical uses of *Veratrum Viride.*

Being desirous of gaining all the information within reach, bearing upon the subject, so as to make as full and satisfactory a report as possible, I take the liberty of addressing you the following questions, and respectfully solicit an early answer.

1. Have you made use of *veratrum viride* in your practice? If you have:
2. In what form do you use it; (if the tincture; whose preparation?) and in what dose?
3. What are its effects?
4. In your opinion, what is its *modus operandi?*
5. What value do you attach to it as a remedial agent?
6. In what diseases have you found it most useful?

Give any other information upon the subject you may possess, and address A. HARD, M. D., Aurora, Kane County, Ill., as early as the first of March, 1860.

Yours, &c.,

Aurora. Ill., Nov. 28, 1859. A. HARD.

FLORA OF ILLINOIS.

From a communication of Dr. George Vasey, of Ringwood, to the *Chicago Academy of Sciences*, we learn that about 200 species, including some 50 species of Cryptogamic plants, have been added to the Catalogue of the State; making some 1,200 species thus far observed.

A FAVOR.

The unexpected demand for the first number of the *Examiner* has so far reduced the edition on hand, that we would esteem it a special favor if any of those who have received the January number, and do not wish to become subscribers, would return the same to us, at our expense.